

PARTICIPATION WHERE IT MATTERS: EXAMINING THE RELATIONSHIPS BETWEEN
GOVERNMENT OFFICIALS IN DEVELOPING COUNTRIES AND THEIR CITIZENS IN
THE AGE OF DECENTRALIZATION

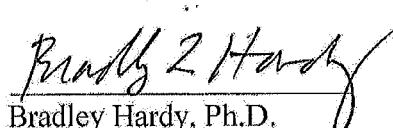
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DEDICATION

This dissertation would not have been possible without my wife and my family. My father, who continues to teach me how best to live. My brother and sister, both of whom have championed their own unique and incredible strength. My wife, whose support has been unwavering.

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ABSTRACT

Today, participation of the citizenry is key to development in democratic countries. However, participation levels are not consistent across countries with similar central development strategies or even subnational units within one specific nation. Little information is known regarding why there is variability of participation under the same formal national development policy. A better understanding of what is associated with participation is needed. Therefore, with the help of previous work, the general research question this dissertation attempts to answer is, “What factors promote the public participation of citizens in developing nations?” In this study, public participation is defined as the exchange of information between citizens or citizen and public official either as positive support or negative disapproval.

Based on an extensive literature review, this question was broken into three crucial sections: central government actions or decentralization in the countries of focus here, local characteristics, and local opinion. In order to address predictors of participation, this dissertation quantitatively examines the national and sub-national variables associated with local government relations in developing nations claiming a decentralized format. The countries of focus are included in the 35 African nations which participate in the Afrobarometer Survey. This survey is the heart of the analysis, but was supplemented with information from local budgets, auxiliary data, and case studies. Additionally, in order to perform the final quantitative analysis, factoring was needed to form the dimension of participation and those which impact it, allowing more

nuanced assessments. The results were found to be mixed in terms of expected vs. realized strengths and direction of relationships, such as the negative relationships of fiscal power and fiscal decentralization with participation. In trying to understand what actually drives participation in the first place, the hope of this dissertation is that national governments and development organizations can now mold new strategies.

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Introduction

Among international government organizations and the academic field of international development a prominent strategy in democratic countries is to move public service decision-making powers from the central government in the capital to the regional, village, and local government units. The belief is, based on relevant research, that local citizen participation will bring empowerment, accountability, and allocative and productive efficiency (Crawford and Hartmann, 2008). In international development, this is known as “decentralization,” and is the dominant strategy for economic and political development utilized by more than 75 central governments since 2005 in efforts to help pull their citizenries into middle-income status (Ahmad et al., 2005). The ubiquitous role of decentralization, and its use of participation, in the public sector solidifies the importance of both decentralization and participation. With an expansive array of adoptive nations, this strategy of pushing decisions to lower-levels not only interacts with national level differences but also those ground-level variations within a country. However, the often-overlooked flaw is that the local environment (e.g., individual characteristics, community demographics) and local relationships are rarely considered when devising these plans to induce participation at the local levels. This is not to say that the characteristics of the average subnational unit are not acknowledged in the process, but rather that the individual areas in which each local government has responsibility are not considered in the national implementation of the policy. Instead, a general, central strategy is diffused top-down through the structural hierarchy.

In trying to grapple with how scholars may compare public administrations from different units or nations, Heady (2001), a founder of comparative public administration, expressed the imperative of understanding they are only part of the governance collective whole. Individuals

influencing local government decisions have, in the past, been described as ‘black boxes’ by academics not able to explain fully the factors influencing why these individuals make the decisions they do (Bossert and Beauvais, 2002; cited in Brinkerhoff, 2007). Agreeing with Heady and accepting the challenge of the black boxes, this dissertation attempts to treat central administrations’ policies on decentralization as one factor impacting citizen participation. As such, nine African nations are examined here to better comprehend the flaws associated with decentralizing governance while trying to incorporate local level variables helping or hindering a major goal of decentralization, which is citizen participation. The intent is to heed Heady’s warning and not commit the same mistakes of the central governments and not examine other influences before making determinations. Local environments are a crucial part of governmental stability in a democracy, specifically how the local citizenry chooses to participate. Development experts and national government officials in democracies need to understand these factors in order to promote future participation. As such, this research study seeks to test the hypothesis that local characteristics, local relationships, localities’ traits, and yes, policy factors from the central government, in the current form of decentralization, are associated with participation. Guided by literature from Public Finance, Public Administration, International Development, and Political Science, I conclude that citizen participation is inherently positive for a stable and sustainable, democratic government. And, through quantitative analysis determine that individual and local characteristics can promote citizen participation at higher levels than central policy on decentralization

The Study: Participation in Developing Countries

Political participation of a nation's citizenry is arguably a major component of a stable and functioning democratic government. Development experts consider this participation as necessary to underdeveloped nations and is the focus here. The nations closely examined here are: Uganda, Tanzania, Ghana, Mali, Zambia, Kenya, Senegal, Mozambique, and Namibia. These countries all have transitioning capitalist economies and democratic governments; however, they differ in that they have varying demographics, local relationships, and strategies for development. The sample of African nations should be a strong representation of how local and central factors influence citizen participation on the continent. This study accepts the immense literature regarding the argument for local participation found in Psychology, Organizational Theory, Public Administration, and, of course, International Development and instead focuses on how local participation can be impacted by institutional policy, individual characteristics, and perceptions and experiences.

In their article promoting a bottom-up perspective of policy implementation (a counter to the accepted centralized, top-down strategy by authors such as Pressman and Wildavsky (1973)), DeLeon and DeLeon (2002) found participation at the local level as crucial to effective policy implementation in a democratic system. Even in the strictest of top-down structures, where a national government forms laws, arranges the policies for implementation of the laws, and then monitors the state and district public officials, there is still on-the-ground variation that the central power had not expected, and it is up to those administrators at the local level to make decisions. Participation by the local citizenry is the foundation of legitimacy for their decisions. Thus, even in the most centralized and controlled policy formation/implementation environment the study still finds discretion and a need for local participation.

For the purposes of this research study, participation is defined as the sharing of information and opinions, through discussion and action, between citizens and officials, and the citizen's ability and power to voice approval and disapproval. As such, participation can be potentially negative, such as political protest, or positive, such as attendance at community meetings and contacting local officials about concerns. In both scenarios, citizens are expressing their opinions public issues in the public space. The assumption driving the belief of "development through local decision-making" has been that moving financial and political decision-making down to the local level will pull up local participation from citizens (and development along with it), and governments will perform more efficiently and effectively due to this upward accountability from citizens (Olowu and Wunsch, 2004). This is the formal construct through which government attempts to render local participation. As such, it is what officials have the most control in changing and is a focus of this study along with the other individual variables such as views on relationships between citizens and levels of government.

Will there be local dialogue when decision-makers are locally elected (political) or when local officials have control of their finances? When focusing on the local perspective, the demographic make-up of a subnational area likely influences on the level of participation from the population. For instance, does a heterogeneous area have a higher likelihood of participation than a homogeneous, holding the level and type of decentralization constant? Might there be a relationship between the diversity of an area and the operationalization of a decentralized system? Does this bring about a more successful, citizen engaged system regardless of levels of decentralization? Situational characteristics of citizens in a district, such as party affiliation, economic vulnerability, and ethnicity in relation to the local majority, can each be related to how individuals interact with local government officials (Ndulu et al., 2008; Easterly and Levine,

1997; Van Dijk, 2008). Perceptions of corruption, trust, attentiveness, capacity, authority, and problems with services affect general feelings towards government officials (Ivanya and Shah, 2010; Gurgur and Shah, 2005; Bracking, 2007), and those feelings directly associated with participation (Huther and Shah, 1998). Based on the influential works of Arnstein (1969) and Campbell and Marshall (2000) for participation, Bahl and Wallace (2005) and Cheema and Rondinelli (2007) for decentralization, Moehler (2007) for individual characteristics, and Zhou and Zhang (2009) for perceptions and experiences, the study will examine three empirical questions about political participation in the context of developing nations, answering each through data analysis guided by the literature and a re-assessment of current development policy:

1. Are individuals in areas with high levels of financial and political decentralized decision-making more likely than others to participate in local governance?
2. What specific demographic characteristics predict participation in local governance? These include Financial Involvement, Fiscal Power, Politics, Ethnicity, Age, Gender, Education.
3. Are individuals who perceive local officials negatively and/or had poor experiences with the officials less likely than others to participate in local governance? These include Accountability, Corruption, Confidence, Approval, Fair Treatment.

Outline of Chapters

Chapter 1 provides a review of the literature on the link between local characteristics, centralized policymaking, and political participation. The aim here is to better understand how participation at the local level is promoted, and to clarify how individuals can participate. Due to the strategy's dominance in central government policy, the nuances of decentralization are examined. Using the literature's guidance on what are significant factors, local characteristics will focus on actual experiences, citizens' perceptions, and individual characteristics. Relevant national government factors are also examined, with an emphasis on the local governmental systems of several African nations—among which a set of 3 case studies are conducted. These studies look at the institutional, environmental, and historical characteristics the national and local governments find themselves working within.

Chapter 2 will focus more on the theoretical motivations for the study and its dimensions, the hypotheses which direct this study, and the expected results. Chapter 3 will detail the models, data used, and methods through which these hypotheses can be adequately tested. After an extensive assessment of the variables, including operationalization and importance, the results are described in Chapter 4. This study provides a quantitative analysis of the impact that the level and type of decentralization (fiscal and political) implemented may have on local citizenry's engagement of local government. Though each respective type of decentralization is generally meant to bring about the same goal of localized decision-making and build on one another, their implementation process and specific effect are unique. Using an analytical framework that decomposes countries to their respective local authorities, the other part of the analysis can better understand the causal channels by which individual opinions, outlooks, and demographics have on local government. Pairing district-to-district and then nation-to-nation comparisons can be

made in order to answer these critical questions. Within a country, the level of decentralization is more likely to be relatively structurally the same throughout, as the central government is the main implementing actor; however, the different subnational units are unique in their demographic make-up. SNGs in focus have been researched to determine the uniqueness of the decentralization process and a differentiation of their decentralized structure can be demonstrated. The results of this analysis could influence the discourse; the results are described and situated in the broader literature, addressing disagreements as they arise between the theory, hypotheses, and the results. Chapter 5 will briefly provide suggestions for future research. This discussion includes an assessment of policies to promote local participation via decentralization.

Chapter 1: Literature Review of Dimensions

Connecting citizen participation, government, central policy, and the influence of the environment requires the use of theories and research from several disciplinary fields and sub-fields to frame the study. These fields include public participation, decentralization, corruption, ethnic conflict, the roles of power, and foundational works of political science and public administration. The argument for the basic, foundational importance of participation is found in the psychology and organizational behavior literatures, with the focus on the person-to-person interaction/exchange of information. For participation to have a positive impact on accomplishing tasks in an organizational structure in democracies, participation must not only be sought once establishing the priorities of the group but also during the planning process. In their assessment of 35 years of research on goal-setting theory, Locke and Latham found that when there is even a basic explanation to a population of the reasoning behind a particular goal to those who manage the tasks needed to accomplish the goal, this simple explanation can work to generate a higher level of performance than those goals dictated to the group (2002). The more communication and participation there is in the initial priority-setting process from both the leaders and those putting the potential plans to action, the more likely they will achieve their goals. The study is in line with the benefits of constant participation by the citizenry and not just the single passive act of deciding who represents them by elections. This brief review of the literature focuses on participation and the environment (policy, perceptions, and the individual) in which it occurs.

In order to analyze local participation, current and historical institutional, policy, relationship, and environmental characteristics, along with participation, need a detailed review. Old institutions, focused on retaining power in the central governments, can still hinder

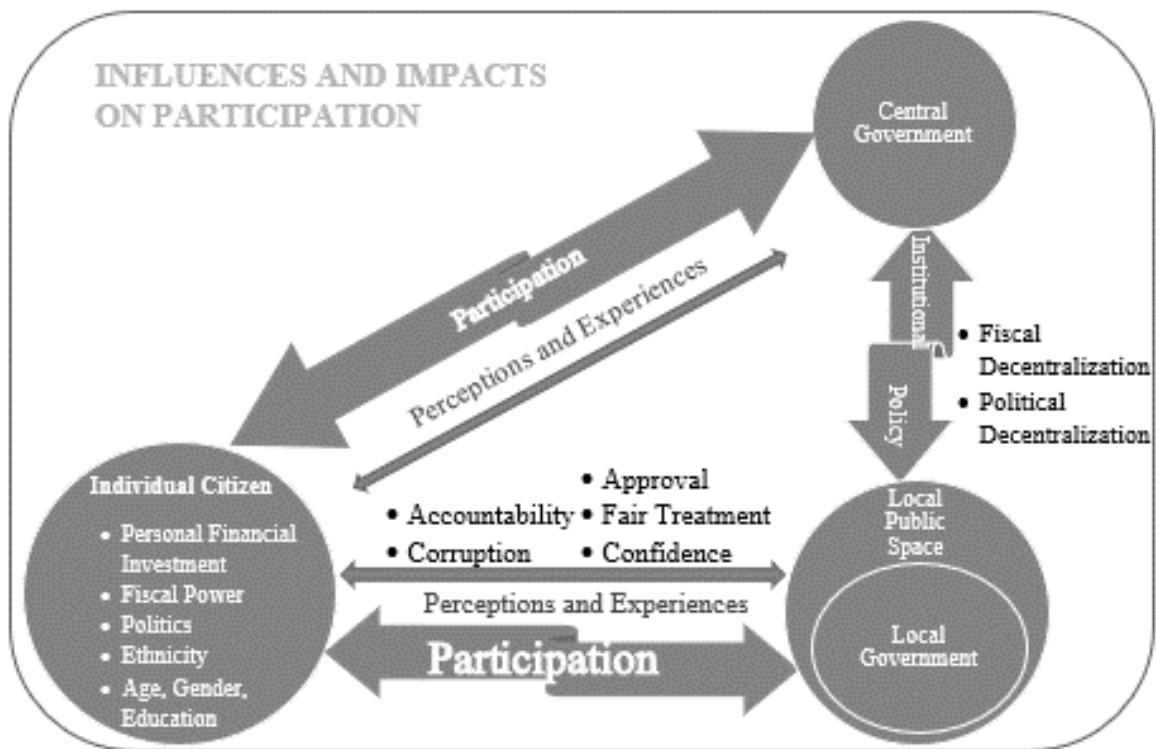
participation today in present institutions. Additionally, if there are transfers of power in present institutions, they lead to more participation; while how individuals perceive the environment and the officials making decisions helps determine whether they believe participating will make an impact. In order to defend and expand upon the above statements, a critical and extensive review of the relevant literature found below. Though a number of these variables require more discussion due to nuance and complexity, each is believed to have a relationship with participation.

Participation

Participation and Its Influences

An assessment of participation in context and its applicability is presented here to emphasize participation's importance to the study's empirical questions and to development. As such, the central drivers for participation in democratic development, decentralization, and the greatest local outlet for participation, civil society, are also addressed, linked through theory and rational for existence. To better explain the impact these different variables may have on participation at the local level, the model for this study is found below. As the dependent variable, participation is meticulously examined here, along with the institutional policy dominating development which is decentralization. Each additional variable is included based upon their use in past research on participation in developing nations and accompanies a brief explanation of their measurement.

Figure 1: The Study's Model



Participation in Public Policy

Before entering a discussion on participation's importance in democratic government and policy, the study needs to solidify what this exercise looks like within this context and environment of a nation. Mullins (2004), views participation as necessary to a democratic society, being, "a function of both formal institutions and informal elements of social capital." Fox and Meyer (1995) saw citizen participation as, "the involvement of citizens in a wide range of administrative policy-making activities, including the determination of levels of service, budget priorities, and the acceptability of physical construction projects to orient government programs toward community needs, build public support, and encourage a sense of cohesiveness within society" (cited in Kakumba, 2010). Fox and Meyer viewed participation as a process or means to an end for community stability and efficiency in development policy. In a similar fashion, this research will attempt to encompass what is public participation, including those expressions of disagreement with government, with the same underlying assumption those actors choosing to enter the governance space here have; which is that everyone wants to see the community do well, but they have different strategies.

Based on previous research by influential authors, like DeLeon and DeLeon (2002) and Lipsky (1980), local participation is important for long-term stability, current policy implementation, and ongoing accountability the citizenry. Even in Pressman and Wildavsky's (1973) belief of a rigid top/down implementation, there is still some local discretion and thus, a need to gain an understanding of the local population for the local decision-makers to maintain local support and their position, if elected. Therefore, though the value of the type and level of participation in focus may be in debate, the study will consistently view participation as a

stabilizing, legitimizing, and optimizing influence on local institutions of decision-making, and needs promotion.

National governments and international agencies' focus on the local level helps with the effectiveness of policy and a better allocation of resources. This helps to reinforce the argument for local participation and decision making that considers local characteristics. Whereas an implementation strategy starting from the top level and working the way down keeps the objective in mind for each set of lower steps, starting from the bottom and moving up looks first at the environment in which the policy change is needed and can determine, based on the lowest organizational structure, capacity, and anticipated reactions, how best to solve the problem. With the latter, the biggest decision as leaders move out from the lowest level is how best the next tier can best contribute to the policy change (Elmore, 1979). The focus in this leading policy strategy of "backward mapping" is less on the strict control of the executive or central command, seen in Africa's past, and more on the completion of a policy goal at the local level without impediments from the central or upper levels as seen in decentralization strategy.

Participation in Problem Solving in Public Policy

This encouragement of participation at the local level is acknowledged and promoted in the developed, Western world and more specifically, the United States. Heclo (1978), found that even though there was a six-fold increase in federal spending from 1949 to 1977, there was little increase in employment at the federal level and instead an expansion at sub-national levels, where investing in local level government and the organizations and associations that make up the governance network formed the foundation of this expansion. In the governmental structure, where central power is far away (figuratively and literally) from on-the-ground implementation, if there is no understanding or negotiation with those at the lowest levels, then local relations will

lack any personal connection and there will be unforeseen difficulties at the point of implementation (Kaufman, 1969). Effective implementation comes from proper planning and understanding what is going on at the local level. This understanding comes from actively engaging the constituency and assuring the constituency they are unhindered in bringing their opinions forward.

In several respects, these problems the public is deeming as important are coined as “wicked” by public planning literature because they are long-lasting, complex, and require the ongoing discussions and sharing of opinions with the electorate. Such problems demand ongoing participation from the public. Social problems are inherently “wicked,” according to Rittel and Webber (1973), as solutions are not clear-cut and finite. As the authors describe, these wicked societal problems have: no formula; no stopping rule; no true or false; no ultimate test of a solution; no trial-and-error (failure causes new complications to the problems); no set list of solutions; no perfect example for replication; no independence from other problems; and no one explanation for the problem.

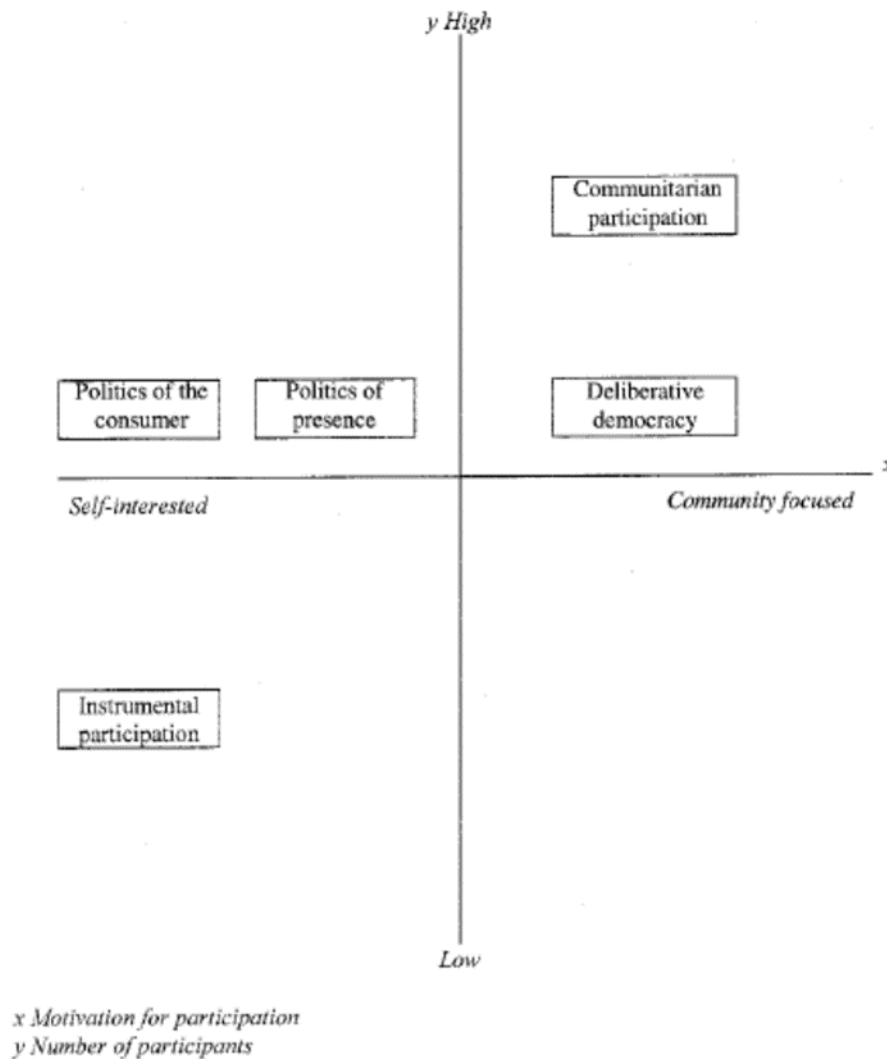
Decision-makers at the local level in the developing democracies likely have a handicapped bounded rationality, not of their own doing but circumstances, resulting in the need to pull in other views and knowledge to obtain the best solution. Whether the obstacle at hand is providing clean, accessible drinking water or providing an acceptable level of primary education, there is no cure that when applied for a certain number of months will resolve the issue. There needs to be a continuous engagement by respective groups to ensure that the public solution or mollification maintains its effectiveness long-term as the public problem and the reaction likely evolves over time. With the wickedness of the problems and the limitations of local officials, the participation of local populations is doubly important. The citizenry providing first-hand insight

and manpower when needed, both resolves issues long-term and brings stability to the community to develop.

Types of Participation

Participation is not an amorphous action that lacks categorization or even ranking. Campbell and Marshall (2000) detailed a well-structured typology focused around the number of participants involved in the participatory action of the individual and the motivation for said action (Figure 2 found below). Within the classification system, the least beneficial to the community form of participation is termed “Instrumental Participation,” while the category with the most utilitarian positives is “Communitarian Participation.” While the first is rather simple and straightforward, the community becomes more powerful but also more complex as more participants and more community centered interests are involved. As such, Communitarian Participation, particularly as civil society, is discussed in depth here. The study measures participation with several questions regarding actions a citizen may take to participate in the public space through factor analysis.

Figure 2: Rationales for participation in planning (Campbell and Marshall (2000) after Stoker, 1997, p. 167)



Civil Society membership as participation. As already discussed, group participation requires more interactions and effort than an individual choosing to participate by him or herself in the public space. In his comprehensive analysis of public deliberation, Roberts (2004) clarified, “The issue of the common good is not just about direct citizen participation. It is about direct, deliberative citizen participation—the ability of citizens to reason together and to come to public judgments with their peers in face- to-face meetings about issues of public concern” (p.340). Given the increased complexity of the group’s internal and external dynamics it is

described in more detail here. Before addressing the relationship between civil society membership and participation in a democracy, the study requires a definition of civil society:

Civil society is defined as 'an aggregate of institutions whose members are engaged primarily in a complex of non-state activities-economic and cultural production, voluntary associations, and household life and who in this way preserve and transform their identity by exercising all sorts of pressures or controls upon state institutions'.¹ For most of Africa, in terms of this working definition, civil society would include trade unions; professional associations; church and para- church organizations; resident, student, business and other special interest associations; the media; and various types of non-governmental organizations (NGOs).—John Makumbe, 1998

Civil society organizations are structures through which citizens act or the organizations act on the citizens' behalf in the public space. As such, it is necessary to highlight nuanced variation which can occur in CSOs' roles and definition as actors for citizens. Of note, as a construct, civil society may exclude both religious and indigenous institutions only if they are defined and identified as exclusive to only helping a part of the community (through belief or ethnicity) and not the general community advancement. By contrast, civil society is a non-discriminatory, inclusive community that should promote the same equality of access to the government that democratic government structures promote more formally. The organizations within civil society should represent the views and goals of the citizens that are members or at least the primary goal which motivated membership. Ideally, in a developing democracy, civil society is pluralistic, representing multiple viewpoints and stakeholders, allowing it to advocate government action and publicize when the public officials do something in (or against) the stakeholders' interests (Zafarullah and Huque, 2012). However, as is witnessed below, the

expansion of democracy in African countries did not create Western-styled civil societies; instead, it created a space for the interests of portions of the public to expand, some of which primarily steered toward challenging the state, and churches and their organizations were a part of this space (Hutchful, 1996).

As with the government sector in western countries, citizens' community engagement is often based on need and perceived citizen utility levels. While an individual by themselves may not harbor the attention and commitment of a local official on a matter, a group working for a collective purpose may fare far better to sway a public decision. Membership in local organizations is potentially a sign of local government's lack of productivity, compelling citizens to build capacity in other actors of governance or signify the aligning of interests to better position an engagement with local officials in a plurist system ("Decentralization," 2001: Azarya, 1988). Regardless of intention, membership indicates participation in local decision-making.

Now, Lindblom (1965) considers participation through the entire space of local governance (e.g., government, stakeholders, CSOs, religious leaders). A lack of adequate representation in locally elected officials may compel citizens to debate and shift views in talking with neighbors and speaking more on these inadequacies directly with local government officials or indirectly presenting a potential threat and opportunity to strengthen local government capacity. Under such a pluralist system, citizens, as collectives and individuals, would bring forth problems and potential solutions to the forefront for the local government decision makers and need to be considered in regard to participation in democratic systems.

Civil Society: Western concept in the developing world. It would be naïve to take the Western understanding of civil society's role in governance and transplant those parameters to

Sub-Saharan Africa without proper adaptation to the historical environment through which it has evolved. In a little over a century, African civil society experienced an informal existence prior to colonization, then destroyed during European occupation for fear of uprisings, and summarily suppressed in most nations shortly after independence due to one party rule and lack of public space yielded by ubiquitous governments. With the fall of several long-time “Big Men” of Africa and INGOs’ adoption of development through public participation, it was only in the past few decades that civil society was given the opportunity to grow (Makumbe, 1998).

The role of colonization cannot be understated when discussing the development of civil society in Sub-Saharan Africa today. The situations in most African nations cannot be summarized as a purely state-civil society dichotomy, as is the case in western literature. Hutchful (1996) pointedly explains that before colonization occurred, many regions may not have had modern states, but they did contain distinguishable civil societies defined by public participation and accountability in decisions made. Ekeh (1975) detailed this further by explaining a canonical paradigm of a civic public created from Western structures and the primordial public which are underlying social structure predating colonialism. With this paradigm to understand civil society in Africa, Osaghae states:

As it were, it evolved to fill the gaps created by colonialism and functioned as an exit site for those who felt alienated from the state as well as a parallel or shadow state that provided the public goods and services (such as schools, dispensaries, scholarships, and micro credit) that the state failed to provide, through self-help efforts and resources sometimes corruptly and criminally expropriated from the state. (2006)

The author explains that these local efforts to provide basic services to the public due to an inept or indifferent democratic, governmental system, were founded on those local demographic

characteristics that examined in this study (e.g., ethnicity, religion). Civil society's expansion amid the third wave of democratization did not mean an immediate coalescence of public interests and acting as an equal, peaceful partner with the state. Opening a space for public input has meant the potential for ethnic, religious, and class-based violence (Hutchful, 1996). Though there has been an expansion of civil society organizations since the massive INGO charity blitz of the 1980s and '90s, to assume these distinguishing factors have disappeared would score an injustice to the local self-reliance developed during colonization and African governments up to the present.

Civil Society: Western cynicism. Western-centric arguments dating to Dahl (1970) suggest that a public without a high level of literacy and training in the public affairs of the country would be a hindrance to administrative development if allowed to participate. Wiarda (2003) found that some scholars have concluded civil society cannot be prosperous in SSA because the citizenry, "lacks the educational base, the literacy, the communication grids, the mobilized and organized populations, the webs of association life at grassroots levels, the interest group and political party systems, and the governmental infrastructure, funding support, and public policy implementing capability" (p.47). Such a statement gives a bleak description of not just civil society's development but every major actor in the development process, which compels the inquiry of which variables can grow to help push or spark the development of all others. In this respect and as already seen, an elementary form of civil society, collective participation for a common goal, is often the basis of the organization itself which leads to development of other structures, as detailed by Barnard (1938). There is thus a foundation to be skeptical of the grim assessment by Western scholars.

If democratic governments lack accountability and populations lack education, which would mean they do not have a justification to participate, the governments are free to engage in corrupt practices, and corrupt officials thwart budgets supporting social/economic development. Therefore, the study encourages and emphasizes the potential benefits of popular participation, regardless of formal education, here. Garcia-Zamour (2001), in investigating civil society in developing countries, found that the more an individual knows about government the more likely he or she is to participate. Goodsell's 1994 polemic for bureaucracy in America confronts the false, evil representation of public administration described by politicians garnering support from a restless citizenry. Instead, the authors recount a system as efficient as the assumed superior business sector and here, well-liked by those in the public who have to interact with the administration. Though arriving from different perspectives, these two authors point to the potential for a strong and constructive relationship between a citizenry that stays engaged and informed on public issues and the government, itself, given the opportunity.

Civil Society: A complex relationship with participation. Though civil society is a positive outlet through which local citizens can participate in local public decision-making, civil society can act in a contrarian or alternative role to democratic government. However, by better understanding the circumstances in which these roles develop, the study can better gauge the circumstances on the ground. With this in mind, the most relevant and important question for the research design asked here is how citizens respond to a political system when they feel the system is or is not trusted or inclusive. In the Voice/Exit literature, Azarya's option of disengagement provides a beneficial perspective to this question. The author explains the terminology of disengagement as, "the tendency to withdraw from the state and keep at a

distance from its channels as a hedge against its instability and dwindling resource base” (1988, p. 7).

The purpose of a citizenry obtaining alternative outlets for acting on and voicing problems within the district is not to undermine local government structures, but rather to develop a sense of urgency or survivability of development projects in the area. In this scenario, the role of non-governmental organizations and informal community groups promoting the needs of the district is not full disengagement or an exit from the political system and is still participation in the public space. From the perspective of the government organization, the shift is a failure of the public sector to remain attuned to the impactful environmental factors. In this case, without continued “consent and support” from the citizenry affected, leadership within the local government structure loses its legitimacy (Selznick 1948).

In extreme circumstances, when government becomes inadequate, the populations may reduce/remove their participation in the formal markets and focus efforts on other outlets with more ability to produce positive results (Azarya 1988). Though the causes of local government incapacity are debated, (e.g., district proliferation stretch human capacity too thin or the thick environment of corruption), the potential result remains a decrease in public confidence for officials to effectively resolve local issues. From past discussion, the discussion knows participation can overcome insufficient capacity in the local government; however, local governments losing importance in the public space is possible, if the local officials are not the ones pulling in participation on decision making. The disconnect between the individual citizen and local government can result in an increase in civil society organizations’ public participation. Ndegwa (p.4, 1996) highlighted that civil society may be for or against the government, but the actions and participation in the civil society by citizens is still contributing to the empowerment

of the people and the democratization of the country. Therefore, any future discussion on the topic of civil society is done with the highest levels of caution.

Decentralization

In the decentralization model promoted by organizations such as the World Bank in Africa, participation by the citizenry is necessary for the legitimacy, stability, and effectiveness of the nations is a key outcome in being able to reap benefits from decentralization in a democracy. The general focus of this development strategy is moving decision-making to the closest level of government to the people as possible. By doing so, citizens will have more incentive to participate and work with local officials as these officials have more familiarity locally (being locally elected) and have more decision-making power to act on these problems and public services citizens view as important. These incentives are important, as citizens, particularly those in developing nations with lower incomes, have less free-time available to them. Given the importance of decentralization in the developing democracies and in the promotion of participation, this set of variables is granted a more nuanced examination.

Participation is important to several modern decentralization strategies of democratic development but is often taken for granted in their implementation process. As decentralization is a driving theory behind democratic development strategies for the past thirty years, this system of ideas has received its own section; the study discusses the general role of participation in decentralization here. Participation is most useful and sustainable when this use of free time impacts the decisions and policies at the heart of the participation, as discussed with “empowerment.” Decentralization means to increase that empowerment and raise the level of local participation while this participation expects to legitimize and promote government’s further implementation of a decentralization strategy.

Decentralization restructures democratic governance in the majority of developing countries in Africa. In 2005, the International Council on Human Rights Policy found that 80%

of those nations in the developing world were practicing decentralization (cited in Crawford and Hartmann, 2008). Often overlooked in the West, the notion of some local freedom in decision-making has become ingrained in national/international development policy and the environments on the ground. As an established, well-known, intended motivating construct for participation, it is deserving of a dedicated section addressing its impact on participation and the political environment in general.

Over the past 30 years, there has been a policy emphasis on shifting decision-making as close to a problem as possible to achieve the most effective solutions. Decentralization typically restructures governments such that subnational governments (SNGs) are to serve in the national structure and as the medium for local priorities to become local actions. These local governments in democratic nations intend to create an active public policy environment allowing citizens every possible involvement in the “midst of service provision” (Zafarullah and Huque, 2012).

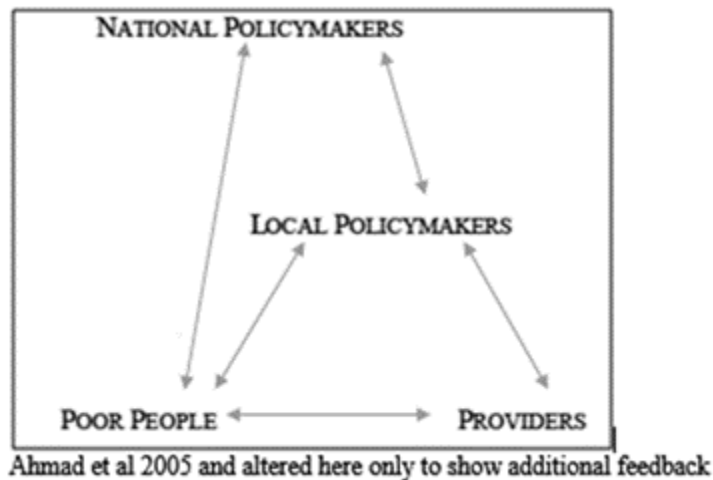
Decentralization in Practice

International agencies, such as USAID and the International Monetary Fund, have focused on promoting a bottom-up perspective of accountability in response to the problems generated by centralized, authoritative governments in Sub-Saharan Africa’s past (Olowu & Wunsch, 2004; Dijk, 2008). Several sources agree with the general definition of decentralization as transferring powers, responsibilities, and fiscal and human resources from higher to lower levels in the government (Crawford and Hartmann, 2008; “Democratic Decentralization,” 2000).

Decentralization has two major forms: devolution and deconcentration. A summary definition for devolution, or democratic decentralization, is that it occurs when “resources, power, and often tasks shift to lower-level authorities who are independent of higher authorities, and who are at least somewhat democratic” (Manor, 1999; cited in “Democratic

Decentralization,” 2000, p. 9). Though the exact wording of devolution varies, consistent aspects of its explanation are the transfer of powers over resources and local decisions with reasonable autonomy from the central government. Seen in the model below and affirmed by Locke and Latham (2002), there is a continued loop of policy and feedback in the decentralization process. There is a symbiotic relationship between decentralization and local participation.

Figure 3: Decentralization Pattern Model



There is a folly in believing the participation of an electorate will automatically spring up, given a space to do so by an adequately implemented decentralization, and will then be resilient to any future threats by government, business, or even civil society organizations. Despite what scholars may have first thought, decentralization is not a panacea for all underdevelopment, nor is it a simple strategy when it comes to implementation. However, when done correctly and with the right conditions, it can promote and take advantage of one of the most important aspects of stability, progress, and democracy, which is the engaged participation of an electorate. Additionally, in developing countries, major hindrances to stability, progress, and democracy are citizens’ traits and citizen perceptions and relationships. Detailing the frailty of decentralization and the rewards produced when done correctly, Bardhan (200) states:

Decentralization, to be really effective, has to accompany serious attempts to change the existing structures of power within communities and to improve the opportunities for participation and voice and engaging the hitherto disadvantaged or disenfranchised in the political process. After all, the logic behind decentralization is not just about weakening the central authority, nor is it about preferring local elites to central authority, but it is fundamentally about making governance at the local level more responsive to the felt needs of the large majority of the population.

Thus, the most effective government strategy is to have public involvement in as much of the policy-making process as possible, thus giving the citizenry every opportunity to express its needs and build support for the policies (Fox and Meyer, 1995).

As is the case with theory and practice, there is a discrepancy between what is thought to occur between decentralization and participation and what does. In describing the details of decentralization's ascension to development strategy dominance, the theoretical picture of public participation's role in this system of governance becomes further highlighted; however, a brief description of potential broad benefits is found here to detail the possible impacts of decentralization, taking into consideration how variables may vary:

- Pressure on local governments to be more participatory and responsive
- Generations of social capital (trust, norms, networks, communication), bridging and bonding
- Increased capacity for local collective action
- Improved beneficiary targeting of services (for example, focused on the poor, disadvantaged, and marginalized)
- Improved matches between services and beneficiary preferences

–Enhanced potential for scaling up of service delivery [Brinkerhoff, et al., 2007]

Though expectations have varied based on the level and types of decentralization exercised, it is important to understand the believed benefit nations and their international partners have for community participation in this governmental process.

The possible benefits of democratic decentralization are extensively documented by development experts, which include academics, economists, and politicians, and listed above. Attempting to group likely positive outcomes in simple terms, the two major benefits used in current literature are allocative and productive efficiency (Kahkonen and Lanyi, 2001).¹ Governments achieve allocative efficiency through allowing local leaders and populations to decide how resources are invested in public services, with the goal of reducing wasteful spending. Like in the private sector, local governments need to provide adequate services at a reasonable price (taxes) or citizens will choose to go elsewhere (Boadway et al., 1994). However, mobility and choice are tied directly to affluence, which is not common among most citizens in developing countries, potentially negating the option of citizens moving. Citizens instead may stay to try to change local policy. Productive/technical efficiency suggests that with fewer levels of bureaucracy, the local governments can handle larger funds under the auspices of the public eye. That is, devolutions, “occur within an institutional environment that provides political, administrative, and financial authority to local governments” (“Decentralization,” 2001). Going into more detail, a list of potential direct benefits to the citizenry directly in a democratic system include: greater government accountability; improved problem-solving capacity, opportunities for sharing technical and social expertise in policy making, influence over

¹ Also known as Allocative and Technical Efficiency in other texts (eg. Mehrotra and Delamonica, 2007, 154-155).

policy decisions, and control over the development of policy programs (Anderson, 2003; cited in Zafarullah and Huque, 2012).

As found in the review of dimensions below and implied in the assessment above, the central government policy of decentralization not only affects the environment in which a citizen may participate, but it may also affect the perceptions and experiences of the individual and even how individual demographics compare to the subnational unit. For instance, higher levels of political decentralization can cause high levels of administrative density, which decreases the talent pool for government positions, and thus decreases the capacity local governments will have to handle problems and concerns brought forth through citizen participation. As such, though the study expects higher levels of political and fiscal decentralization to be associated with higher levels of participation, it is possible that these higher levels can promote or harm perceptions, experiences, and demographics which then impact participation.

Considering Riggs' (1964) explanation of the prismatic model and forming of administration in transitioning countries, when addressing the decentralization cases of Sub-Saharan Africa, each nation's structural, institutional, and cultural backgrounds need to be considered by the study, much of which the national studies for the selected cases address. The prismatic model is one where multiple systems and structures are found together and overlapping. For instance, Tanzania's history of socialism adds another aspect when considering or planning for decentralization. Though the country had a centralized system of government similar to that of other pre-1980s African countries, the socialist ideals held there pushed for decision-making from the bottom-up, and not just the top elite, meaning that both lower, poorer classes and affluent elites would have the ability to influence decisions. The resistance from elites is not under-emphasized, but "at least as important is that lower-level bureaucrats and even

those citizens the bureaucracy once served, however poorly, will resist the dismantling of a structure within which they had become adept competitors or occasional beneficiaries” (Verdery, 1999). This is to say that the people could reject the reduction of power in the central government, even if it moves more power to the citizenry, as they prefer the familiar structure, and thus, past institutions may remain.

In general, as the central ruling regime has a continued power dynamic with local government structures, if left with no other option, real political power affecting the population is pulled by the central government or local direction, but the costs are high (Wood and Bohte 2004). Regardless of its concentration, power continues as the scarce and cherished resource as it has no challenge from within the bureaucratic system and a few from government transparency activists. INGOs like Transparency International focus their efforts around central government activities and elections, leaving local governments elites to their own devices. Though democracy and a combating corruption and elite capture is on the rise at central levels across the developing world, except in countries like China, activities found at the local levels are often close to corporatism (Wiarda 2003).

Historically in development, there is an assumption that tipping one problematic domino will cause the rest to fall and result in a conquerable number of impediments to progress. Though civil society has often been a necessity for democracy (Friedman & Kihato, 2004; Diamond et al., 1988), the promotion of a strong civil society does not insure a strong participatory system. Just as free and fair elections or a multi-party system are only indications of a liberal political system, so too is a participatory civil society (Ndegwa, 1996). Elections, multi-party systems, and civil society can be undermined by a stifling central power or be voluntarily unresponsive local government due to the positive incentives offered by the central authority and little

accountability from the public. For example, Uganda has practiced quick recentralization of control since the formation of the constitution in 1995 and the Local Government Act in 1997 despite containing well-established CSOs and councils created by the central government (Nyirinkindi, 2007).

Exceptions

The model used in this dissertation makes assumptions in countries/region of focus that are not ubiquitous in the entire developing world. For instance, the countries directly involved in this study are those which have attempted to adopt a democratic process with a capitalist economy. Several of the nations in the past have tried and failed to utilize a centralized system, which helped spur the shift toward a more decentralized system. However, this is not meant to discredit those systems which have been able to make a non-democratic, strong central government, non-capitalist system work and work exceedingly well. For instance, China is arguably the most successful development story in the past 40 years and shares little with the countries in this study's model. Just in 2003, China saw a 9.1% increase in outputs and 23% increase in capital spending/investment with 94% of the foreign direct investment in East Asia (World Bank, 2004). China has witnessed this level of development through a strategy of strong, unitary, central government in an established communist system. However, the country has seen high levels of decentralization in at least the administrative form of deconcentration where local governments are appointed by the national government and act as satellites. Though the nation has a strong authoritarian, one-party system, China does have nearly 60,000 subnational units (Bahl and Wallace, 2005). This immense array of subnational units is able to be maintained through the strength of the national government. Though 52% of total revenues and 56% of expenditures are at the sub-national level, provincial governments need their budgets approved

by the central government and local governments have theirs approved by the provincial governments (Shah, 2004; Bird and Wallich, 1993). In this system, there is a high level of communication between the central government and the satellite governments. As Bahl and Wallace (2005) state, “Even in China, provincial leaders (who are appointed by the central government) lobby for a greater flow of resources to their provinces” (p. 86). The miracle of China and its bucking of Western, democratic, capitalist development on the way to transitioning into an economic powerhouse cannot be ignored. However, the Chinese model is not one taken by most Sub-Saharan African nations or is no longer used due to previous failure in political centralization. As such, this study examines the nations in the model based on the strategies their leaders, at least publicly, state they are intending to implement. The study does its best to qualify any broad declarative statements with qualifiers which acknowledge the exceptions found in Asia and particularly China.

Individuals in the Public

Participation's motivation through the citizen's own characteristics is well-documented in the development and participation literature. Moehler (2007) examined the process through which citizens were willing to participate in creating Uganda's most recent constitution. Within the author's model he identified several individual characteristics (poverty or financial power in this model, ethnicity, age, sex, education) to be significant and each was to a varying degree. Though Moehler focused on participation in the onetime event of creating a national constitution, the study still holds a solid framework regarding individual characteristics for this study's focus on more everyday participation in the public space. In line with Moehler's poverty variable, the study includes personal financial involvement based on authors such as Mullins (2004). Additionally, Stokes (2007) presented a thorough argument for the value of political party affiliation in the decision-making process. These variables should surmise the impact of individual characteristics on participation.

Financial Involvement

Scholars agree regarding which individuals need to be engaged in this communication process for it to be considered community participation and to obtain the ends of public support, social cohesion, and local stability. Brynard (1996, p. 40) concluded the process had to be made up predominantly of "common amateurs," who are, "the non-elite citizens; persons without paid office, wealth, special information, or other formal power sources beyond their own numbers; and whose control is gained only from the participatory process" (Brynard, 1996; cited in Kakumba, 2010, p.173). Crook (2003) simply says local decision-making needs to include the poor and the underprivileged.

Perceptions and views of the government, its services, and the public officials in charge of those services directly impact a citizen's decision to participate in dialogue with the government. Based on the Voice/Exit literature regarding Azarya (1988), if individuals do not believe their representatives are working in their best interests, they are unlikely to invest their scarce free time interacting with local officials. A strong measure of whether citizens find value in the current quality of public services provided by the government is if they believe the public should continue to pay for them through their taxes. Mullins (2004) found that a key to participation is having this financial contribution come from the citizenry, which may compel individuals to watch where their money is going. To this point, Huther and Shah (1998) discovered in their quantitative analysis that local investment from the citizenry, which they summarize as fiscal decentralization, has associations with higher levels of participation and lower levels of corruption (cited in Ivanyna and Shah, 2010).

In this reasoning, those who actively avoid contributing financially for public services will spend less time steering quantity and quality. However, those dependent on these services for their own family survival may participate through necessity, voiding the Financial Involvement argument. These three factors represent citizen-government power dynamics often seen at the local level. Intuitively, buy-in from the citizenry at the local level into the push for stronger citizen-government relationships is important for participation in a democratic system. Van Dijk (2008), found success in Tanzania's flow of governmental goods, services, ideas, and people through local governments' relationships with citizenry committed to a localized system. The Financial Involvement factor for this study will most likely include those questions regarding taxes and payments for public services.

Fiscal Power

Before the study conducts an analysis of local government and citizen relations, there is a need to address the power dynamics between the central and local officials and the locally wealthy, as these interactions are related to the necessity or efficacy of citizen involvement. Lacking strong/widely accepted systems of accountability institutionalized in the government system, central elites can arguably fear disaggregating power to the districts. Sub-national authoritarianism has grown in popularity recently as an unexpected side-effect of national democratization and the push for local control. Instead of control being held in the capital, power shifts to the district level. Allocating powers to local leaders, with little control from the central government, allows for a tight handed control of the district/region's daily activities by politicians and possibly increases the engagement with local organizations. The literature views the relationship between central-local as one where the district leaders can hold off influence from central government by threat of using the local electorate, and therefore, undemocratically control the logistics of the district (Gibson, 2005). However, sub-national authoritarian scholars still acknowledge the power of nondemocratic districts exist with the overarching approval/authorization of the central government depending on the power relations affected by geographic distance from a capitol, political affiliation, SNG resource independence, etc. (Giraudy, 2010; Durazo and Herrmann, 2010).

The Fiscal Power of the individual citizen's expected positive role in participation should not be underestimated in this model. Garcia-Zamour (2001) found that, "There is on the one hand, the so-called urban elite, bureaucrats, politicians, military officers, and teachers, and on the other, the rural and urban poor who have no participation whatsoever in the making and implementation of public policies that supposedly would help them" (p. 43). The financial gap

causes the wealthy and the poor to hold different social decisions, how best to spend free time for the rich and how to survive for the impoverished. Put bluntly from a Western context, Roberts (2004) stated, “Groups with money often are advantaged over other groups who lack the knowledge, skills, and resources to be heard in the political process” (p. 322). Individuals with financial means may also be more impacted by subnational decisions such as regulation and taxation on their businesses and means of income. Wealthy citizens can create more opportunity to engage with officials through tools such as donations for officials future election campaigns or offering to fund a public project which may suit the affluent person’s needs. However, with their own finances supporting them, wealthy individuals may not see a need to invest personal time in the public space beyond what their finances can bring them.

Much of the literature regarding citizens’ relationships with government deals with cases where the nation in focus has high levels of wealth and stature. It would be a poor assumption to believe literature dealing with populations in developed countries directly apply to those developing without consideration for how both culture and economy change an individual’s outlook. Garcia-Zamour (2001) found that citizens in low-income countries have low expectations for public services at the local level. This partly explains the rise in community organizations and the growth of civil society out of necessity, but also makes it more difficult for increased local decision-making, even properly implemented, to receive the level of participation from the citizenry to have an adequate understanding of local need and future feedback. For example, in subsistence farming free time is a rare commodity placing participation in government at a low priority compared to relaxation or family time. This is especially true considering the lack of confidence in public services being provided at an adequate level. Consistent with the above conclusions, Bahl and Wallace (2005) found more broadly that the

less affluent a country is the less likely SNGs will have substantial control over expenditures. Unfortunately for this study, the data only addresses the citizen's own perceived financial standing in the community and not their actual financial wealth. As such, the questions in this factor will focus on how well their household is doing economically compared to their neighbors. National household income and distribution (GINI Coefficient) might be helpful in better understanding poverty's effect on participation.

Political Affiliation

This study accounts for political affiliation of citizens, affiliation of the local government officials, and the central government's affiliation. For instance, in Uganda, the NRM is often synonymous with government. The public sector is the national party in the citizenry's view. Most employees and officials hold a uniting belief system and encouraged to increase their interactions as in a regime (Stoker, 1989). The approval of the central government result in more discretion in local decisions with the assumption that local officials observe the uniting beliefs. From her interactions with districts, Lambright (2011) was able to determine that personal relationships and frequent contact with the capital would increase the autonomy and support received by the central government. However, the loyalty both appointed and elected officials alike mean to have is not of local government ideals, but rather for the dominant party. The central government appoints key district officials, such as the Chief Administrative Officer (in charge of civil servants) and the Regional District Commissioner (the direct representative of the president). With the increased power the positions have experienced post-1997, their assumed principal, the national government, provides an incentive for elected officials to fall in line. However, the district may not have voted a majority for the current president and are thus being removed from the principal-agent relationship. Methods of patronage to increase and expand the

influence of the NRM government transcends to other officials through other means, such as behavioral tools. Political affiliation of just the citizen means little without that of the local government's head and the central government's party. As such, this variable will comprise pairing the individual with the local government whether their parties are the same. However, it is entirely possible that with political agreement between the citizen and the official comes an assumption that officials will act in the best interest of the citizen so there may be little interaction post-election.

Ethnicity

How is ethnic identification associated with a citizen's decision to handle a problem? Are the citizens participating out of necessity? Demand? Common purpose? Is community/religious membership a positive advancement for civil society organizations or does it signify ethnic divides which need accounting for? Though an aspect of the research is looking at the heterogeneity in SNGs and the effect on participation in the development strategy of decentralization as a more recent area of study, the obstacle of ethnic diversity under the control of one entity has been an issue for the national governments of developing countries since the surge of independent states after World War II.

In the past, the dominant passive representation of different ethnicities in central government was to add a member of the ethnic group to a ministry position to mollify local concerns and shows the importance of the ethnicity in what Mwase and Ndulu (2008) call a redistributive system. The assumption is an obvious level of Western-defined corruption would occur, the new minister claiming funds and projects to bring back to their group, but this strategy decreased instability. Arriola (2009) found that an increase of one minister for the respective ethnicity would decrease the likelihood of a future coup d'état occurring at a higher percentage

than a 1% increase in the national economy. Now, the assumption with decentralization is that it handles ethnic fragmentation in a more engaged tactic of active participation at the local level by different representatives. Local groups come together with government officials and discuss problems and solutions, and the officials with their expertise implement the solution most appropriate for the problem. If it does not satisfy the populous, the officials fail at re-election.

Ethnic fractionalization is a significant indirect factor stifling national growth in the SSA context over the 50year period from 1950 to 2000 (Mwase and Ndulu, 2008). Despite the minute, and even manmade from colonists, differences between tribes, ethnic identity still has a relationship with interactions between citizens and even the flow of commerce. As stereotypes and perceived slights against one another in history cause ethnic strife and hostility, an often-recommended solution is continued local discussion and participation by the citizenry to increase cooperation and growth. An extreme example in an extreme time would be Rwanda and its Gacaca court system after the 1994 genocide. However, as it stands now there arguably is an ideal distribution of ethnicities in a government determined by historic animosities and divergence of groups, for purely stability's sake. Mwase and Ndulu (2008) found that when there are only a few strong ethnic groups, hostilities are most likely (e.g. Nigeria). However, when one political party incorporate several ethnic groups to be a national contender, ethnicity becomes less important (e.g. Tanzania). Similarly, when the vast majority is of one ethnic group and it would be inconceivable to adequately discriminate based on tribe, fractionalization is not a factor (e.g. Botswana). However, this has typically taken ethnicity from a national scope, while this study looks locally. With information being more limited the closer the examination is to the ground, the tool for measurement at the local level is more basic for this study; however, district make-ups will also be used. Though the study assumes ethnic agreement will spur public

participation, like with politics, it is possible having the same ethnicity will mollify any desire for the citizen to participate if they believe the officials share their priorities.

Personal Characteristics

Since the survey data is a compilation of individual views, steps are necessary to consider individual characteristics. As such, the study should also take into account the citizen's age, sex, and formal education. The study extensively discussed education above in its relationship to public participation and the capacity of subnational governments. Age is important to include because older individuals are more likely than younger individuals to engage in political and social participation (Lambright, 2011). On gender, authors such as Wantchekon (2003) have made the point that women are more likely to see past immediate benefits from clientelism and corruption and try to assess more long-term benefits of the policy. Additionally, these variables are measured more easily than those regarding perceptions and individual characteristics with one question addressing each of these directly.

Public Perceptions

For this set of variables, the study utilizes the past research of Zhou and Zhang (2009) in Sierra Leone as guidance. In their own endeavor to understand the relationships between how citizens view local officials and citizen participation, the researchers found the following to be relevant: Confidence through Authority; Trust; and ability to influence local government officials. In addition to Zhou and Zhang (2009), the current analysis will incorporate the influential research Ekeh (1975), Bratton (2007), and Crook and Manor (1998), to justify the inclusion of corruption and approval as variables. As these are complex concepts, not one survey question is able to adequately measure the respective variables and are therefore assessed through several questions in a factor analysis. The goal is to have successfully bettered the understanding of the ongoing dynamics between participation and the factors and strategies contemporary literature in development studies have deemed important. To do this, how countries index variables by factor are addressed below. By doing so, we can begin to understand the national and local factors.

Authority (Capacity and Accountability)

Addressing decentralization as a static form of strategic development would overlook the complexity and variance found among and within countries claiming decentralization. This shift of powers to the local governments across multiple spectra depends on the state, the issue, the environment, and the autonomies needed in the endeavor (Oxhorn, 2004). Oxhorn (2004) examined national cases of implementation and found that “there is undoubtedly a higher level of local autonomy concerning the issue of trash collection, even while more important policies relating to sanitation and environmental regulation are decided exclusively by the national authorities.” Depending on the problem at hand, states may or may not relinquish power in the

decision-making of public services. The power dynamics between central government, local officials, and local populations require consideration by this study. It is the intent of this study to look at the more tangible effects and impediments in those policies, such as levels of decision-making for the SNGs, current demographics, and perceptions of local governments and their relationships to local participation, the core to success in the development strategy.

Though Dauda (2006) contests a union of theory and practice, he states, “when local governments can take full responsibility for their functions, the logic goes, then citizens may demand accountability from them. This should open up the possibility for the development of political relations of accountability through participation.” With the same level of reservation toward theory in practice, Mullins explaining von Braun and Grote’s (2000) examination of decentralization’s effect on poverty states, “They suggest that effective decentralization may be expected to lead to both improved technocratic responses (improved targeting of limited resources) and institutional voice (through enhanced political participation).” Lastly, serving as a firm explanation for the connection between public accountability and development, Ghartey (1986, p.89; cited in Garcia-Zamor, 2001) states,

The main root of power struggle, underdevelopment and misery in Africa has been attributed to inadequate accountability manifesting itself chiefly in corruption and economic mismanagement. The power that permeates the public bureaucracy grows out of the almost absolute discretion African leaders and public officers generally exercise and the inadequate of the present controls in the bureaucracy.

When discussing and analyzing the status of the local decision-making strategy, the legislative/policy-making aspects are often addressed without examining accountability in the implementation. Andrews and Schroeder (2003) explored this void with an examination of two

very different public services, health care and rural road construction, across sub-Saharan Africa. The authors found that what occurs after passing bills is remarkably different, most noticeably weaker in terms of local government power, from the formal policy legislated. Though it is easy to pass legislation, without a continued focus and dedicated pressure to implement these laws, the reforms may falter. When moving from a grand central plan to the intricacies of implementation that includes local planning, accountability, budgeting, and management, much of the intended good governance loses focus (Kakumba, 2010). Andrews and Schroeder believe the main cause of the insufficient local decision-making compared to the legislation is slow capacity development at the local level to handle problems and an unengaged central level; however, there are possible additional reasons. Like Andrews and Schroeder, this study looks past legislation and examines how local governments' handling of their fiscal, political, and administrative responsibilities, along with the local environmental factors, promotes on the ground participation.

Regarding the local governments' education levels' importance in public problems, in their detailed analysis, Ingraham and Donahue (2000) summarize management capacity as "government's intrinsic ability to marshal, develop, direct, and control its human, physical, and information capital to support the discharge of its policy directions." The study, here, addresses quality and sufficiency of human capital available to fill subnational governments. The professionalism and expertise obtainable at the subnational governments (SNG) levels are typically not the same as in the capital cities, and this is especially true in developing countries (Ebel and Taliencio, 2005). For example, Uganda has a literacy rate around 70% and approximately 35% of its population's income is below the poverty line. Those who are qualified and pursue a government administration job often find themselves overburdened with

duties, as district councils cannot find sufficient numbers of qualified applicants to hire (Lambright, 2011). Therefore, even when capable employees fill some vacancies, the district cannot take full advantage of their other qualifications, as these employees often need to juggle several other positions.

This study assumes that when officials, or at least the local government system itself, have some level of authority within the community, problems found within local services will spur individual citizens to participate in the public space which may help find a solution. However, the study understand how the presence of problems in and of themselves may be an indicator that the capacity of local governments is low and citizens believe they need to participate in the public space in order to solve problems the officials cannot. Though the study does measure the quality of government through the confidence and approval dimensions, it is possible problems mean the opposite as expected. Regardless, the study believes problems in the community will invoke citizens to engage in participation rather than disengage and not participate.

Corruption

Next in motivation for participation looks more specifically at how corrupt the citizen perceives the decision-maker to be. Gurgur and Shah (2005) found shifting decisions to local levels to have negative relationships on corruption, as local governments providing more access to officials can promote a better coupling of the need of public services and resources. What is known about corruption in the development literature, regardless of the public's view, is that the act and mindset associates with a number of factors impeding stability in western-backed political structures and public bureaucratic infrastructures, such as weak political competition, underdeveloped civil society, insufficient public service integrity and ethics, and weak

democratic structures (Bracking, 2007). However, as perceptions of citizens matter when discussing local views, the handling of corruption by this study is in context. For Sub-Saharan Africa, the practice of corruption in government or who controls power and why, has existed since the end of colonization and the rise of “big men” in Africa (Bratton, 2007). Thus, here the study handles perception and experience. Corruption should have a direct relationship with levels of participation. There is an established impact by an increased strength in local government through more public participation (Mullins, 2004). This is a reaffirmation of what the World Bank had found in their assessment of Uganda in 2001, determining local governments are less corrupt than that at the national level (“Decentralization”).

Comparative policy literature has also often discussed how local cultural perceptions of corruption influences the role of the state in citizens’ lives (Ekeh, 1975). Riggs (1964) states, “There is even disagreement on the relation between administration and culture- whether the administrative behavior is uniquely determined by particular cultures or correspond to general levels of socio-political integration.” Looking at Sub-Saharan Africa’s (SSA) own exceptionalism, Ekeh (1975) presents how corruption in the region is not as easy to identify as what Westerners consider as “right” and “wrong.” The governmental and administration structures found in Africa today are remnants of the colonial era situated on top of the primordial system, which includes ethnicities and networks of communities. The results are two public faces for those in government office, the primordial and the civic.

In order for a member of a respective group who acquires a public position, to remain a good man, he exploits his role in the civic public (the result of colonial institutions) for the betterment of those in the primordial public (a particular area or ethnic group) via what the civic public calls patronage and clientelism (Ekeh 1975). In his study of Ghana, Price (1975) found

that communities expect people in power to use their position in government to boost their ethnic group, but also stay unbiased when it came handling issues pertaining to this group, thus creating an unmet conundrum. As the civic public is a creation of western colonization, the obligations with this role, or "face," are not taken as seriously. Along this line of reasoning, Wantchekon (2003) found a significant public preference for clientelism over policy platforms in the 2001 Presidential election in Benin and a threat to current civil society by past ethnic divides (Ekeh, 1975). This means that corruption, though seen as a hindrance in the West, may spur participation in Sub-Saharan Africa if the citizens see personal gain from the corruption.

Moving decision-making and representation closer to the general population may bring allocative and productive efficiency, but it also means citizens have a better opportunity to witness any shortcomings of their representatives. This can breed unrest and a general skepticism of their representatives and the government at-large. The notion of giving opportunities to citizens, raising expectations, not providing capacity, and then having the resulting failure in this situation leading to unrest and resentment by the citizenry is a well-known potential negative outcome in the decentralization literature. Though the study believes the negative feelings will lead to disengagement, it is possible that said resentment could cause citizens to seek new outlets for change or new officials in elections. Transitioning from perception to experience, all variables regarding whether a citizen had to pay a bribe to obtain a public service or avoid problems with public employees (e.g., police, permit issuers).

Fair Treatment

In India, Crook and Manor (2000) found that moving powers to local governments reduces the movement of funds to powerful individuals and allows resources a direction toward services important to the ordinary citizenry. As a poor focus on service in the public sector has

been a cause of corruption, it can reduce citizen inclusion when the majority of the citizenry does not have the finances/free time to engage in this public space. It is the general citizenry that local governments need the involvement of, instead of just the elite, if the officials are attempting to develop their represented area and the local government institutions (Bardhan, 2002: cited in Kimr, 2008). It is unlikely that ordinary citizens will invest the needed time if they do not believe the government treats them fairly.

As a counter-argument, it is possible that closer government, covering a smaller area, giving individuals more voice will also give more opportunity for the more affluent to buy access (promoting more corruption on a smaller scale) and reducing participation from the public (Prud'homme, 1994; Ivanyina and Shah, 2010). Now, individuals' having a favorable view of the nation's current and future democratic system and their perceptions of their ability to express their political opinions freely have an intuitive relationship with participation. The rights of an individual to speak their opinions and pursue their own preferences in politics and economics is important to participation in a democracy, as otherwise they would be confined and find no benefit in investing time into a system they cannot change (Campbell and Marshall, 2000). As such, the assumption that disadvantaged or low-income citizens are less informed on local issues may only be valid on a nation to nation or district to district basis. The study's data includes questions examining how citizens view the government's treatment of groups, specifically ordinary people, women, and government's own officials. The study anticipates the fair treatment factor to include these questions. However, it is possible that citizens will find new, fairer outlets to participate.

Confidence

The civil society and corruption reviews already touched on the effects of a lack of trust or confidence in local government; however, this and the following sections it will address it more explicitly. The innate bond between the governmental strategy of competent, local government promotion and active involvement of the populace predates its usage in development. There have been several negative observations in the more ideal public environments of the West that have reinforced the importance of this bond. With the US War on Poverty underway in 1969, discussing the role of the lower-class in administrative decisions, Kaufman commented on local institutional empowerment stating, “While it is sometimes defended on grounds of efficiency, it is more frequently justified in terms of effective popular participation in government.” Previous sections have already discussed the potential benefits of localizing authority regarding allocative and productive efficiency, thus providing a space to discuss this relationship with participation at the local level. Though there are several strategies to assure that a policy X in a government results in outcome Y (eg. decentralization, devolution, market systems), what is most important is determining the effectiveness of the local public service and assuring that the public knows the actual results compared to the expected (Rivlin, 1971).

This Western revelation came at a similar time to the developing democratic world in terms of government/citizen relationships, with growing social unrest and distrust of the government regarding the Vietnam War. To garner trust between a government and its people, there must be some level of interaction/participation between the two sides along with transparency in the actors’ intentions for that trust to solidify. Though several models of government decision-making can contain these conditions, the most conducive to participation

and accountability and thus more credible and operationally significant performance measures is the current mainstream development strategy, decentralization.

Though increased local government decision-making means to lay the groundwork for higher levels of participation, it is important to highlight the need for continued public involvement to legitimize, through the rapport, the long-term plans of a government's policy and as such the local government be receptive to the citizenry's opinions and concerns. While the current mainstream strategy, decentralization, means to bring decision-making closer to the people by increasing the power of local government, if those local governments lack adequate rapport to handle these new responsibilities, this could dramatically damage new local public service delivery. However, when there are high levels of participation from citizens and the civil society organizations and community associations which they make up, local governments can pull in the expertise of these individuals and groups to better deliver services and, in doing so, build the governance structure and support (Shah, 1998; see also Fiszbein, 1995). Democratic governments planning a stronger local government agenda needs to be willing to listen to the citizenry both for the policy's legitimacy and its sustainability by using citizen involvement to build the local institutions' capacities. Unfortunately, it is possible that when citizens have confidence and trust in their officials, they may not feel the need to participate at all as they assume those officials they hold in such esteem are handling the community's problems.

Maynard-Moody and Musheno found that western public servants at the local level view themselves as advocates for their respective constituencies, often bearing more work than centrally mandated in order to provide services to the citizenry. Local officials find themselves between two often conflicting expectations of efficiency from superiors and representation from the population. As such, a strong argument can be made, and kept in mind throughout this study,

that local officials, when given discretion and power, will typically seek what is best for the citizenry. However, a lack of independence from central government seen in developing countries has hampered such efforts. Correlating well with the shift toward a localized system of development, more and more support has grown for an engaged citizenry and a responsive government.

The centralized system of the early 1970s era development in Africa proved ineffective and only bred corruption within the governments and distrust with the citizenry in Africa. In response, decentralization adopted the view that public officials are only to represent the “wants” of the constituency. A more localized system focuses on the administrative responsibility developed by Finer (1941). Also, officials in the African cases are not generally provided the luxuries assumed by Friedrich (1940). Public administrators, locally elected or appointed, typically do not have a “technocrat’s” expertise in their fields, and as such, their effectiveness relies on the public’s will. This is not to say Friedrich’s role of administrators is less optimal to that of Finer, but, based on the capacity of local officials and the benefit of local participation in Africa, Finer is more applicable. Price (1975) believed Africa cannot put in place rational policy until public administrators have isolation or are above the normal citizenry. However, a gradual move in theory from pure, sterile economic efficiency toward effective, yet sometimes economically inefficient, citizen representation has occurred in the development literature and the local decision-making strategies that have stemmed from it. For instance, if recent western research is an indication of African local administrative tendencies, the push for a more localized system is finally allowing for the organization’s and the individual’s motivations to unify. The dataset utilized in this study addresses this factor directly with questions on the levels of trust citizens have toward varying levels of government and to a lesser degree performance.

Approval

Validation and legitimization of local government come from the respective constituency and the most basic of which is choosing through voting for the representatives leading the local government's decisions. Scholars such as Falleti (2005), explain decentralization and its different facets as a continued process and negotiation between the different self-interested actors (central elite, local elite, interest groups,) rather than a single, finite policy implementation. Describing this argument as "sequential decentralization," Falleti believes the best outcome, in regard to strengthening SNGs, would be first localizing the political factors, then fiscal, and then the obligations and responsibilities that come with administrative. Bird and Wallich (1993) detail the failure of several post-communist countries decentralization efforts and relate it to the lack of proper order and construction for implementation. Testing the theory outside Falleti's South America context, Awortwi in 2010 compared the two cases of Uganda and Ghana, the former taking the ideal path for SNGs and the latter ideal for central power and did find justification for Falleti's claims that order matters when it comes to decentralization. By first allowing the local populations to select their representatives, it gives the local leaders power and legitimacy when negotiating with central leaders. Participation validates people's approval as much as policy.

Lambright (2011) digs deeper into why some districts succeed while others fail at making effective local decisions, using personal relationships between the district and national officials as a determining factor. While the primary focus of the present research is not on the district-central bonds, but rather how opinions and general views are associated with individual connections with the local councils, Lambright's observations are relevant in that local government relationships with central government are connected with those between local government and citizens. Are citizens likely to participate in the local government when they

approve of the directions of the nation's central and local development? The research here begins to answer the question. The free exchange of praise and concern in a public space is well-documented as key to a democratic government. In order to build and secure social capital, De Mello (2004) determined the prerequisites of confidence in government, civic-cooperation, and associational activity. For local government to maintain approval in developing democracies, officials need to continuously satisfy the needs and problems of the community (Crook and Manor, 1998). In this study, the survey data used asked poignant questions on how well central and local government perform their respective tasks. Given the direct and comprehensive nature of these questions, the study expects them to summarize this concept. However, the study does recognize the possibility that, like with confidence, citizens who approve of the job officials are doing are less likely to contact those officials because the officials are already performing as desired.

The Context: Literature Review of Nations

Historical Context

Historical context is necessary to best understand participation and the environment in which it occurs, as past institutions affect those in the present. The majority of Africa does share a common history of colonization, strongmen, and centralized governments. Consequently, they share several characteristics regarding social policy and politics. For instance, the history of Africa indicates a pattern of disingenuous reform, where central governments maintain power and hand out only token signs of solidarity. The 1960s saw a push toward a central focus and out of the local governance scope, which was contrary to the propaganda by national leaders (Mawhood, 1983). During this time, public participation took on a more informal role focusing on fixing community problems through the community and not the government, as the latter struggled to hold on to power.

Even during the crisis of the 1970s and 80s, when international donors were urging countries to adopt structural-adjustment programs (SAPs), which often led to national currencies and employment rates collapsing, leaders were not willing to give legitimate political power to sub-national governments, a pattern still in effect today. Characterizing the opinions of African leaders at the time, Olowu and Wunsch (2004) conclude the men only, “saw decentralization to local governments as a possible mechanism for cutting back central-government expenditures. The usual pattern they followed was to devolve responsibilities, but not financial or human resources to local units.” National governments, during a crisis, were still unwilling to abdicate decision-making on certain issues to local leaders for fear of losing stability, unity, and control of the country. They were willing to sacrifice any growth obtained through empowering the local levels because of this risk. Based on this specific history, skepticism should always apply to any

national development strategy which means moving decision-making powers to lower levels. To this point, the study looks at both more superficial attempts at localization through local elections and more impactful attempts like budget and agenda control.

Colonial Past

Colonization crushed every aspect of community management previously held by populations and replaced them with institutions that were weak or predatory and, for the many that remain, the public view as highly suspicious. First, Western powers designed the institutions put in place for controllability, not governability (Acemoglu et al., 2001). Since profiteering from the colonies was most important, Governor Generals and other respective colonial leaders focused on the extraction of resources at the lowest cost possible. This meant trim colonial institutions built for export, usually around the coastline of a territory. Stability mattered only so much as it related to the flow of natural resources. As seen today, indigenous ethnic groups were often used as cheap solutions to maintaining or forcing local peace in less desirable areas.

As a note, Douglass North defines institutions as, “The rules of the game in a society, or more formally, are the humanly defined constraints that shape human interaction” (1990). Extensive research has shown stronger institutions, more defined rules of the game, have a positive effect in reducing the potential for corruption and increasing accountability, approval, etc. in instances of potentially positive or negative change, like discovery or exploitation of resources in a country (Van der Ploeg, 2011). This does not mean that as countries with bad institutions liberalize, they will gain quality. Rather, those nations who already have good institutions relating to governance and the relationship between citizens and state will do better economically and socially with the new acquisition of resources. Spurring from North’s

definitive work, the institutions found in Tanzania, are largely consistent with those of the pre-liberalization era, help mitigate division and contestation found in resource abundant regions, as the new regime of democratic evolves and adapts to the world economic stage.

The swift independence of most British, Belgian, and French colonies left political institutions with little oversight and a history of best practices to maintain central power and poor governance. With North's (1990) explanation of institutional formation and Pierson's (2000) delineation of path dependency theory, Acemoglu and colleagues (2001) were able to make connections between investments made by colonial powers into the institutions and the status of those institutions and states today. Acemoglu and colleagues found that those areas with higher mortality rates of colonists meant weaker, less well-constructed institutions (more extraction based on minimum cost) and a relationship to the current strength of institutions in a nation (along with income per capita). Acemoglu and his colleagues argue that a colonial past matters in the present. This applies to the current study by helping to understand the progress of institutions and the perceptions of the citizens. The path dependency in many situations in Africa is that there is no path. The colonial powers granted the infant nations no direction and thus many are still floundering (Hyden, 2010).

Colonial Remains

As discussed above, what the colonial powers left behind in the mid-1900s was a lack of human capacity to fill those precarious institutions focused around control. The West had little incentive to educate the indigenous populations and instead imported their skilled labor to run the bureaucracies. As such, the evacuation of these political bureaucrats leaving caused a strain in most nations' institutions to fill the voids with qualified individuals. Previous actions by the West jeopardized Africa's ability to handle the crisis with the mass exportation of the population

for cheap labor as slaves. Acemoglu (2010) argues the colonial powers did not just bequeath weak institutions, they intentionally destroyed indigenous capacity with the slave trade, another natural resource. Devastating outcomes could be predicted after independence with institutions implemented and maintained by Western colonial powers becoming vulnerable to strongman government and few qualified native professional bureaucrats to handle administrative. Newly instated leaders touted grand plans for their nations' prosperity without realistic understandings of the states' situation, potential success, and consequences of failure (Meredith, 2011). This lack of understanding of the nation's current situation caused a debate between the political leaders and the pragmatic bureaucrats still employed and impacts remaining today.

To make matters worse for the public servants, the institutions in which they worked were foreign constructs, lending questions to their own loyalty by leaders and the public. The foreign past of the bureaucracies meant they lacked public support/engagement, which led them to appear less legitimate by central government, which fed back into public views of the institution and those that worked in them. This argument is still made today. Those administrators who did not align with the national leader became marginalized and then removed and replaced with the leader's followers. Numerous African nations quickly came to look like America's spoils system, if coups instead of elections marked a change of leadership (Hyden, 2010). Much like the Governor Generals of colonization to which populations grew accustomed, the goal of new and future governments became control. Hyden points out that institutions are a product of the underlying social forces and structures. It is this incentive of control without restraint that spurred strengthening local government, and what often keeps SNGs enfeebled despite the change in development strategy.

Independence

Since independence, African nations have run the spectrum of development and governing strategies. Soon after WWII and at the beginning of the Cold War, every African nation had a centralized system of government decision-making. Heroes of the independence became their heads of state and quickly rulers of state as they abandoned any hope of multi-party systems and the leaders took advantage of those colonial institutions (Meredith, 2011). The dictatorships prevalent during the 70s and 80s existed partially using the West and the Soviets against one another for funding and supplies. The lack of legitimacy in the public sector and power in the institutions continued with the prevalence of military coups (Clark, 2007). In order to hold power, there were several instances of decentralization, but only in an administrative form where central government created satellite offices to tighten control (Bratton & Van de Walle, 1997). During the global economic crisis of the 70s and 80s, central governments gave local institutions more administrative responsibilities but not the finances and capacity to fulfill those responsibilities, a trend surviving to this day.

From a Machiavellian perspective, rulers use carrots and sticks to buy allegiance or force submission from opposition. The African authoritarians of early independence used overbearing instruments of control such as “(1) co-option and consultation, which in effect indicate that their power is legitimate and therefore a part of the state; (2) patronage, which can be seen as an exchange of state resources for political support; and (3) agreement and accord, between parties and countries, to perform certain activities or to forbear them from performing them” (Jackson and Rosberg, 1982). Though the original Big Men of Africa are now all but history, power has only been diluted to a few elites instead of the old practice of personal rule. Also, despite the “democratization” of Africa, problems of patronage/clientelism and coercive actions by the state

still spring up regularly in the literature on contemporary African politics (Wantchekon, 2003). The continued issues of retaining central power in Africa in the democratic implementation environment suggests the high resiliency of patronage and ethnic fragmentation throughout the political development process. The inability of the central government and line ministers to relinquish power may result in low functionality for several local governments and their citizenries.

The push by the international development sector for Structural Adjustment Programs at the same time meant for more open markets, privatizing bloated state enterprises, banking reforms, removal of agricultural pricing boards, and moving more unsupported obligations to local governments. This economic upheaval and change resulted in several mass protests and even undemocratic head of state removals. It was not until the end of the Cold War and the lack of incentives by the West and the former Soviet Union to support unpopular, oppressive leaders that the democratic elements to development and strengthening local governments became prominent (Olowu and Wunsch, 2004). The international development sector promoted decentralizing power because centralization was such a failure for development. Though discussed in more depth with the case studies, as the study moves into the literature explaining the respective variables, it is necessary to remember the historical context.

Nations

Before assessing the factor analyses for the dimensions and the subsequent quantitative assessment for the relationships in the model, it is important to examine a few of the national cases from which the survey derived the data and citizens surveyed. In the case studies chapter, the study will look in depth at Uganda, Tanzania, and Ghana. This analysis centers on their history, institutional frameworks, government policies, the placement of decision-making power,

constraints on raising participation at the local level, and how nations may increase the participation. Additionally, the cases here examine the intricacies of fiscal policy within a nation to better emphasize the policy's importance. Despite the continued touting publicly of a devolution of powers in the decentralization strategy, where central powers move decision-making to a lower, at least semi-independent level, of government, what nations consistently witness is a deconcentration, where central government is expanding control through dictating local level decision-making. As the importance of understanding conditions on the ground is a primary objective of this research, having a strong comprehension of at least a selection of the nations from which the study is using data attuned to the theme. Uganda is a leading case throughout the economic and political development literature and as such, is a dominant focus of the study. With a better understanding of the context and complexity of the in-country dimensions, the study better estimates how the factor loadings will present themselves in each nation.

Before addressing how these nations diverge and how the divergences should impact the factor loadings, it is important to highlight their similarity and that similarity's limitations. The first two chapters of this study dedicated several sections to the impact of colonial rule on the African nations' transitions to independence and the residual impact today on institutions and how citizens view them. Where France typically preferred to rule over their colonies, directly imposing much of their values and incorporating the colonies into the French Empire; Great Britain chose indirect rule, leaning on the ability of local elite to rule in the empire's name reinforcing indigenous values and harder to be replaced by Western values (Hyden, 2010). Additionally, British colonies were viewed as more democratic and the French as more hierarchical (Olowu and Wunsch, 2004). A number of scholars argue such differences in origins

(Jackson and Rosberg, 1982; Acemoglu et al., 2001; Ekeh, 1975) as ingraining themselves into the fabric of the government, bureaucracy, and citizenry slowly and subtly steering the nations' social, institutional, economic growth. Since independence, Ghana, Tanzania, and Uganda have taken distinctly different paths in terms of governmental institutions' development; however, up to independence their influence from the colonial power was relatively the same, as in all three cases it was Great Britain. Their shared colonial history should negate much of the questions relating to the inherent influences which may be difficult to measure and control as their colonial background as fairly homogenous.

In addition to similar colonial pasts, the national environments have been relatively the same for at least three decades, since the end of the bush war in 1986, Uganda has pushed for national peace and stability, with the northern region being free of guerilla groups for over a decade now and decentralization institutions in place since before the bush war ended (resistance councils). Besides the violent ends of Nyerere's ujamaas and the 1998 terrorist attack, Tanzania has been relatively peaceful since unification in 1964 and has been practicing some form of decentralization since the Local Government Act of 1982, though amended in 1997 and 1999 (United Republic, 2000). The constitution has been in place for four decades and a multi-party system for 25 years. Since Rawling's ascension in 1981, Ghana has experienced mostly peace and a constitution supporting multi-party system for 25 years. Institutional age and the stability over that time period means to induce a maturation allowing formal and informal values to form and institutional knowledge to build (Huntington, 1968). In all three cases, the governments and bureaucracies have had ample time to stabilize and allow quantitative/qualitative analysis.

Ghana, Uganda, and Tanzania began independence with relatively similar colonial backgrounds and in recent decades the same opportunities for their governmental and

bureaucratic institutions to evolve and adapt to best represent the national citizenry. However, how these nations handled these similarities and their differences are another matter which should help to predict the factor analysis. The time period between independence and the nation's current peace represent a strong variety governmental/political background. During Julius Nyerere's 21 years in office, Tanzania made a concerted effort toward being a nationalist, socialist country. Declaring Swahili the national language rather than English showed both a return of the African nation's independence and a unification of the country under one form of communication. A task made both more cumbersome logistically upfront and smoother in terms of long-term citizen resistance with over 125 ethnicities and none having a strong political/economic hold on the country. In cases where no ethnicity has an advantage, ethnicity does not have much effect on issues related to politics or government. Politicians in democracies need to build broad support without being able to rely on any one specific group (Ndulu et al., 2008). As such, one party (TANU then renamed CCM) has dominated across Tanzania since 1954. However, the party and nation has seen a strong competition of CCM members to become President, displaying a respect for party and constitution with each obeying term limits (Wantchekon, 2003; Keohane and Grant, 2005).

Ghana has exhibited not just alternation among a party's elite but actual political alternation with peaceful elections and transitions of power from one party to another. Political alternation shows the citizenry that the political leaders have a respect for the electoral system and in effect the governmental institutions running the country between elections. In response, citizens have more respect for the institutions and see them as corrupt (Huntington, 1991; Bratton, 2013). However, based on past elections, the two main political parties (NDC, NPP) pull their support from regions (North and South) and ethnicities (eg. Ewe, Akan) (Asante and

Gyimah-Boadi, 2004). The Akan Ethnic groups makes up 46% to 49% of the citizenry and overwhelmingly supports NPP. Despite the need for one additional intervention, Ghana has been relatively stable since Rawling's military intervention of government in 1981. Rawling's NDC party first turned over power to the NPP through elections in 2000 (Olowu and Wunsch, 2004). Since independence, Ghana has promoted a Western, capitalist model.

Uganda's history between independence and the current peace is best described as generally tumultuous. Since 1962, Uganda's government has been controlled by Milton Obote's new, struggling administration, Idi Amin's destruction of the administrative system, Obote again, and then Museveni in response losing an election he believed unfair, with war and violence between each transition (Campbell, 2007). Each leader has found his own support in a specific ethnic group and their own inability to handle the historically, economically dominant Buganda ethnic group. Uganda has an estimated 40 plus ethnic groups; however, unlike Tanzania, Uganda's government, past and present, have exploited ethnic divides to maintain power (Schelnberger, 2005). Yoweri Museveni led the National Revolutionary Army in the bush war, and the National Revolutionary Movement (political wing created post-bush war) is still led by Museveni. Despite several national elections, the NRM and Museveni have dominated Uganda since 1986 (1996 constitution).

Though each nation has had decades to form and evolve their institutions, most importantly their decentralized systems, each has had their own experiences and their own priorities. Uganda had what would become the subnational unit, Resistance Councils, since before the end of the bush war (Kauzya, 2007). In this line, Uganda has supported a bottom-up approach to developing their decentralization system, not to mention their constitution (Kakumba, 2010; Kauzya, 2007). Uganda has plenty of political decentralization and, at points,

fiscal decentralization, but little financial support (Olowu and Wunsch, 2004). The will of the central power primarily creates Ghana's local governments and treats them almost as extensions of the capital. Though Tanzania also has a focus on central control, the intent is less on power and more on efficient and effective planning toward development goals; however, it does negate much of the benefits of political decentralization. The budgets at local levels may be large, but the central government appoints most of the decision-makers (Olowu and Wunsch, 2004). The case studies expand upon these differences and their importance.

Uganda

Central Government

In the nation of Uganda, localized decision-making driven from within has been an ongoing process since the late 1980s. Overall, the story of Uganda is one of increased economic prosperity and improvements in human rights and living standards (Manyak and Katono, 2010). Taken at face value, the story of Uganda could be viewed as a success that has resulted from localization of decision-making. Although economic developments are apparent, this is not the complete story. In fact, a more thorough examination seems to suggest that while the structures and framework laid out in Uganda's laws and plans is one of high localization, the truth is that rampant corruption and tight fiscal controls have made subnational jurisdictions servants of the central government (Kakumba, 2010). An examination of the nation's experiences and current make-up help to understand local situations on the ground.

Uganda has a history of violent dictatorship with Milton Obote and the infamous Idi Amin as the country's leaders. Political instability has resolved itself with the National Resistance Movement (NRM) revolution of 1986, with no uprisings since. However, the current president has resided in office for 25 years now, and there are growing concerns, with his win in 2016, that death will be the only way to remove him. As a former British colony, Uganda is a member of the Commonwealth of Nations and a member of the East African Community. A country covering a geographic area comparable to the US state of Oregon, Uganda now contains an estimated 35 million citizens with over 40 linguistic dialects in 132 district level governments. With a rapidly expanding population, Uganda now ranks second in birthrates creating new forms of stress on an already fragile decentralized governmental system (Green, 2010).

The fall of Amin and Obote's state-centered regimes created a moment in the country's history where past policy held little to no value. For Uganda, in the wake of the overthrow of President Milton Obote's regime in 1986, two priorities were promoted by localization, political and economic reforms. Economic reforms are by far the more successful of the two. Uganda has seen a steady growth in GDP of 6.5% per year since 1990 (Francis and James, 2003). Unlike Tanzania and Ghana, Uganda lacked any history of good governance or strong infrastructure, creating a policy void and a potential "policy window" for critical external instruction (Zahariadis, 2007). The past inadequacies placed government structures in the forefront for those in the time sensitive policy formation process. Localization was also a short-term sensible solution for the newly established National Resistance Movement (NRM), as previous leaders Obote and Idi Amin had overseen the full dismantling of national institutions, resulting in local populations creating alternative systems of dealing with local problems (Muhumuza, 2008). These alternatives typically involved some grassroots organizations focused on a problem or cause, such as parents' concerns with their children's education, resulting in the emergence and development of Parent-Teacher Associations (Brett, 1994).

At the end of the NRM revolution, three political actors were key in how the government would construct the powers and responsibilities for decision-making: the NRM elite as the new national government, local leaders representing the larger population, and international stakeholders representing the West's affluence. Each of the actors perceived the problem in a slightly different way. The international non-governmental organization community had finally grown perturbed with funding corrupt and bloated dictatorships and seeing little improvement, believing that low-level decision-making would prove most effective for development. In experiencing the repressive nature of the past two decades, which often caused them to resolve

local issues informally as the central government proved inept, the environment primed local representatives for the nation to allocate powers to the districts (Battaglio, 2009). Most the local structures had served as resistance councils, building support for the NRM during the bush wars as well as developing a sense of entitlement to a new autonomy.

The Constitution established and authorized Parliament, the legislative arm of the government. It is composed of 215 members of parliament that represent geographical constituencies, and 104 members that represent special interests that include: women, youth, workers, people with disabilities, and the army. There are also an additional 13 nonvoting members. The parliament is responsible for establishing laws for good governance, providing for the financing of government, vetting appointments, and auditing government policy and administration. Experts and the citizenry routinely call into question the political responsiveness of the parliament to its citizens (Humphreys & Weinstein, 2012). The President and members of Parliament are elected for 5-year terms.

Current Political and Fiscal Policies in Place

The localization process was multifaceted and comprehensive in Uganda, with one of the core actions being the drafting of a new constitution. After the dismantling of local institutions under Obote and oppression in the Amin years, the new government promoted inclusion in those involved in framing the constitution. The entire process would last eight years, and the product was “[derived from] local leaders, [was] funded and supported by external donors, and [was] enriched by local civil society organizations...Those charged with encouraging participation expanded their mandate and resources to conduct extensive mobilization campaigns” (Moehler, 2007: 170). This included a three-year campaign that focused on gathering insight from local communities (Green, 2010). Though the national level unavoidable enacted the final policy

decisions, the governing document considered what those on the ground, both citizens and officials, were perceiving to need in order for effective governance.

Briefly leaning on the Multiple Stream Framework literature, a stakeholder attempting to enact policy must be present and capable at the time of the “window” to affect change. The importance of Mahmood Mamdani on the decentralization policy (rebranding of international development of localization in policy and practice) is well-documented in the literature (Manyak and Katono, 2010; Brett, 1994). In 1987, the democracy and development scholar led the national commission in Uganda, titled with his name, to create a functional policy promoting the ideals of decentralization, while also satisfying the concerns of the elite with what Zahariadis (2007) calls “salami tactics” (Manyak and Katono, 2010; bargaining similar to Ingram, 1977). The 1987 Resistance Councils and Committees Statute enacted into policy the Mamdani Commission's recommendations for the creation of a central government and the institutionalization of the local councils, creating the five-tiered district structures viewed today (Green, 2008). The legislation was a defining piece of policy for local empowerment, encouraging the Local Government Statute of 1993, the Local Government Chapter of the 1995 Constitution, and the Local Government Act of 1997 (Mahumuza, 2008). Complete credit cannot be granted to Mamdani, as such a satisfactory outcome for the entrepreneur could not have resulted without the coupling of the problem, politics, and policy streams (Zahariadis, 2007).

Decentralization and National Reforms

Decentralization began earnestly in 1987 with informal reforms that were “bold and comprehensive” (IMF, 2003, p. 5) and included reduction of government involvement in commercial activities and the elimination of controls on prices, interest rates, bank credit (IMF, 2003). This continued with the establishment of the resistance councils intending to allow for

local participatory democracy alongside the central government. The desire by the central government was to improve responsiveness and accountability by government in service delivery at the local level, which led to the expansion of power and responsibility at the local level. After the establishment of the Constitution in 1995, Uganda was effectively a one-party system. Although this was a necessary transition, the shifting to a democracy is a difficult process even in the best of circumstances, the transition to a multi-party system remains problematic. While the system claimed a foundation of participatory democracy and the existence of political parties, party actions were limited. These limitations included prohibiting delegate conferences and sponsoring candidates for election. Although a referendum vote upheld these limitations in 2000, just five years later the public voted to reintroduce multi-party elections (Makara, Rakner, & Svasand, 2009).

The Local Government Act of 1997 began the formal devolution of power and functions to all levels of local government. This law provided for the political, legal, and administrative set up of Local governments and Councils. The law designed localities with broad powers of making local policy and regulating the delivery of services. The intention was to include the formulation of development plans and the ability to raise revenues. The subnational jurisdictions include 132 districts and one capital city (Kampala). Each district divides into counties and municipalities. Each district has a head elected official that is the chairman of the local council. Figure 4 (found in Uganda's Appendix) provides the structure of local government, with the Local Government Council (LGC) comprising persons elected to represent electoral areas: persons with disabilities having 2 councillors, youth having 2 councillors, and women councillors making up one third of the council (Uganda Legal Information Institute, 2017). The LGC is considered a corporate body and is the highest political authority in its area. It has both legislative and executive functions.

The Administrative Unit Council is a political unit that advises the LGC on planning and implementation of services, assists in resolution of disputes, monitors the delivery of services, and assists in the maintenance of law, order and security. Table 1 provides the naming conventions for the different levels of local government. The Act designed the structure to provide local officials with a great deal of authority for implementing programs that fought poverty and helped to further develop education, health services, agriculture, water access, and roadways (IMF, 2003).

Decentralization also took place within the structure of government, creating five levels of local government and a plethora of new districts to draw power closer to the citizenry. Under Uganda's decentralization framework, districts mean to act similarly to the national executive within their boundaries of jurisdiction. The district chairperson was the president of his or her district, with committees tasked with managing six areas of government: (1) production and monitoring; (2) health and environment; (3) education; (4) finance; (5) works and transport; and (6) general purpose. With the Chief Administrative Officer and the National Planning Authority, the district council managed the general development plans of the area (Tukahebwe, 1998). These structures are still in place in Uganda today. Though later impeded by the abolishment of the Graduated Tax in 2006, districts also had an ability to generate their own revenue to provide for the well-being of the citizens (Kisembo, 2006). The decentralization process ultimately provided benefits (and political power) to the national government. It built a coalition of legitimacy for the new government from international donors (above) and local councils (below). It also kept the central government from having to deal with an unending list of problems at the local level. The NRM could focus on constructing the institutions needed for a central system of

power. The government would allow the local institutions to continue, but also grant time and legitimacy for weakened state institutions to rebuild their stature (Muhumuza, 2008).

Uganda's unitary state and the promotion of decentralization present a quandary for implementation: the push for bottom-level power was triggered from the top. In the case of Uganda, "he who giveth also taketh away," and the initial decentralization efforts gradually eroded to return power back to the central government. Why did decentralization fail to take root? The explanation is at least somewhat cultural. Uganda is attempting to adapt and adjust to Western ideals (e.g., democracy, local decision-making) in a non-western system/environment. Its philosophy of governance, economy, and social structure are all highly centralized by comparison to countries with centuries of democratic government on which to build (Manyak and Katono, 2010). As a result, the implementation becomes especially tricky and important to policy success.

As Manyak and Katono (2010) explain, "The Ugandan experiment in local government was born out of a blend of idealism and practical necessity. The idealism arose from a nation that dedicated itself to building democracy after years of brutal despotism. The practical necessity came from the need to provide basic services in an environment where local government had essentially disintegrated." The local governments in place at the time were created as part of the political movement that ultimately overthrew the Obote regime in 1986. As revolutionary councils, these local/village level governments were intended to build support and legitimacy for the NRM.

Fiscal and Budgetary Changes

Since the civil war, Uganda has continued to strengthen their budgetary discipline at the central level evident by their transition from a country of high inflation in the 80s to their current position of relative macroeconomic stability and growth. Kuteesa et al. (2010) suggest that while these improvements began with the legalization of a foreign exchange market and continued with the pursuit of macroeconomic stability and attempts to mitigate the effects of market shocks; the more recent budgetary discipline in the years since 2000, that include the separation of fiscal and monetary policies have been the key driver of poverty reduction and sustained growth.

Representative bureaucracies exist to hold the executive accountable. To that end, the Uganda Bureau of Statistics has also provided reliable and independent data (DFID, 2012); this has assisted in the ability to improve the national audit functions and allowed for greater scrutiny of public expenditures by parliament. Uganda has also made improvements in the area of human rights, however, arbitrary arrests, mistreatment of prisoners, and an inefficient judiciary still exist (IMF, 2003), this detracts from representational democracy. Frameworks are found in more detail below.

The Budget Act of 2001 requires the President to provide the Parliament with estimates for revenue and expenditures for the next fiscal year and estimates for fiscal and monetary programs and economic and social development for the next three years. This act provided oversight and a system of checks and balances. For example, the act also requires a three-year forecast for revenues and expenditures. There is also a requirement for the Heads of Departments to submit estimates of revenue and expenditures. Bodies established by the constitution submit the estimates without amendment but are subject to government recommendations. The Parliament Budget Committee and pertinent sessional committees

review estimates upon their submission. Their recommendations are forwarded to the Budget Committee who after a full review, return them to the President with their recommendations. Every bill introduced in Parliament must be accompanied by its financial implications, to include its estimated impact on revenue and expenditures for a minimum of the next two years. This bill also established a Parliamentary Budget Office as part of the Parliament that comprises a full and part-time budget and economic experts. Besides being ‘on call’ consultants, they also provide economic forecasts and recommendations for reducing budget deficits.

The Central government has four primary own source methods of revenue generation. See Table 2 for a breakdown of revenue sources by type. An income tax on individuals and corporations that have 10, 20, and 30% increments based upon income thresholds and includes taxation of employee benefits, a value-added tax (VAT), import duty, and excise tax. Transfers make up 30% of the national budget. In total, 88% of the transfers to subnational jurisdictions are conditional grants, 11% are unconditional, and the remaining .5% are equalization. Of the conditional grants, 78% are recurring (mostly wages) and 22% are developmental (Bitarabeho, 2008).

In 1986, Uganda introduced the VAT and the initial rate was set at 17%. The forecast assumed that this would generate sufficient revenue to offset the losses associated with the Sales Tax and Commercial Transaction Levy. Despite initial challenges in implementation and enforcement, the VAT tax has endured. However, taxpayer confidence has remained poor due to a need to balance greater oversight to minimize fraud with a need for timely tax credits. Although Uganda revamped and improved the system, the refunds remain inefficient (Kuteesa, Tumusiime-Mutebile, & Whitworth, 2010). Although the country expected a regional norm of 5 percent of GDP, the rate has not surpassed 4 percent. This is partly due to the extension of

exemptions and zero rate lists. To some extent, there are also losses in efficiency due to a lack of administrative capacity. As one of the first countries to provide a Poverty Eradication Plan (PEAP) to the World Bank and IMF, Uganda's participation and efforts in this regard have been a significant driver of donation support (IMF 2003). International donations from international non-governmental organizations, with conditions on spending, make up a very large percentage of Uganda's revenue (IMF, 2003) (see Grants and other revenue in Table 2 and Figure 5).

The graduated tax, which was the primary source of revenue to the subnational jurisdictions was frequently the subject of national policy. The central government in 2006 removed this tax, which represented the primary source of revenue for localities and the only source of revenue for the most economically disadvantaged localities. The loss of revenues has not been adequately or consistently replaced, leaving the localities in a disadvantaged financial position (Bahiigwa, Ellis, Fjeldstad, & Iversen, 2004). With the abolishment of the G-Tax in 2006, formerly the main source of locally generated revenue, an estimated 95% of district budgets now comes from the CG (Manyak & Katono, 2010). Conditional grants continue to grow as a portion of national funding, 85% as of 2007, leaving only enough unconditional grants to cover the costs of maintaining and running the district administration (Crawford & Hartmann, 2008; Wunsch & Ottemoeller, 2004). The initial intent of decentralization was to provide the bulk of funding to subnational jurisdictions through unconditional grants and allowing local jurisdictions to be responsible for service delivery. However, as time has moved on, local officials are more subservient to central powers.

Who Holds the Decision-Making Power

The central powers gave district local governments the ability to hire/fire employees and made localities responsible for primary education, healthcare, agriculture services and water and

sanitation services. They were also responsible for raising revenue and budget formation. The central government and ministries maintained responsibility for setting priorities and standards and monitoring implementation. Although set up in a decentralized fashion, the central desire to advance policy priorities led to the use of conditional grants as the primary financing vehicle for service delivery. This offers limited budgetary decision-making discretion to the localities. Conditional payroll grants pay wages, and allocations to specific sectors were not subject to local discretion (Bitarabeho, 2008).

With the political and fiscal framework established, based on the Ministry of Local Government's website it is clear that the country understands the necessary ingredients for decentralization.² The key elements of the decentralization policy include: The devolution of powers, functions and services to the people at appropriate levels where they can best manage and direct their affairs; empowerment of the people to participate in and take decisions on all matters affecting their lives; the transfer and distribution of adequate resources to support the implementation of decentralization; to establish in each Local Government a sound financial base with reliable sources of revenue; building capacity of local governments to plan, initiate and execute policies in respect of all matters affecting the people in their areas.

The primary disadvantage for subnational jurisdictions is the lack of any meaningful ability to generate revenue and the high use of conditional grants. Although Bird (1993) would appreciate the lack of unconditional grants because there is still a requirement for accountability to central government, the extreme nature of the conditions also prohibits meeting the needs of the local population (if the needs are above a basic level). Mullins (2004) explained, "Fiscal

² <https://www.molg.go.ug>

decentralization entails access of subnational jurisdictions to revenue mechanisms necessary to exercise decentralized authority” (p.3). Simply, no revenue, no authority. This provides no meaningful autonomy since national interests are local interests. While the structure is appropriate, without any fiscal ability it is meaningless (Hermann, Horvath, Peteri, & Ungvari, 2005). Without any autonomy, local governments have no incentives to improve quality or efficiency or to even raise revenue (Shah, 1994). Several recent moves have suggested a shift back to centralization.

This idea of locally elected officials controlled by the central government lends itself less to devolution and more to deconcentration, a concept previously abandoned by the development community. The early form of decentralization meant to keep central authority over districts by maintaining the local powers as “satellites” within the national government structure (Olowu and Wunsch, 2004). Without fiscal independence and the lack of allocation efficiency, important to localized power, district legitimacy and role as an important factor in the democratic government process is threatened.

Providing even more credibility to the decentralization process, The Local Government Finance and Accounting Regulations (2007) outline the responsibilities of local governments. These regulations provided broad powers and nearly full control of local budgets and their execution at the local level. However, the regulations stipulate that: localities pay particular attention to Government conditional grants and ensure those regulations are observed, Chief executive of the council (also the Accounting Officer) must report to the minister and Auditor General any “waste, extravagant administration, or failure to achieve value (Section 9.2.©)”, report upon request to the Minister, Auditor General, Inspectorate of Government and head of internal audit and at the end of a fiscal year must also provide a statement of final accounts to the

Auditor General. At the local level, the bill provided for the Local Government Budget Committee that is responsible for oversight of the budget formulation process for local governments. It also includes provisions for the Local Government Releases and Operations Committee that oversees budget implementation processes. Each of these committees has representatives from both the central government sectors and the local governments. Finally, to capture and assist in the formulation of best practices, the Local Revenue Enhancement Coordination Committee is responsible for the development and coordination of budget policy (Saxena, Paul, & Goel, 2010). A thorough review of these regulations, as written, would lead one to believe the legal framework for decentralization is strong and provides the foundation for a responsive local government that can meet the demands of its population.

The current power grab by national elites largely focuses on reducing the fiscal control that local government councils have over their policies and programs. The central government now controls the budgetary planning process for districts. In theory, the central government is to act as a mentor for the local leaders in the budgeting process. Although the Ministry of Finance conducts regional workshops to help local leaders develop their budgets, with 85% of the district's finances wrapped up in conditional grants, the result is central officials telling the district chiefs the “guidelines” for the upcoming fiscal year and the districts having no choice but to accept (Lambright, 2011). National sentiment for local autonomy grew during the Amin and Obote dictatorships and was given an outlet by central government with the NRM's resistance councils. The desire for local autonomy culminated with the Mamdani Commission and subsequent legislation. More recently, powers have begun to shift back to the central government. Manyak and Katono conclude that, “Many local government leaders perceive

funding dependency to be a form of recentralization...One district chairperson complained, 'we are becoming nothing more than contractors for the central government'" (2010, p. 10).

Local finances continue to hinder the autonomy of local government officials in their decision-making. The central government began to pay the salaries of sub-national government leadership, and prior to the 2006 election, central government appointed the leadership of these councils (Saxena et al., 2010). As indicated by Bahl (1999) subnational governments need to have taxation powers. The removal of the graduated tax, despite its shortcomings, was another policy change that undermined local capacity and was counter to the rules suggested by Bahl. This lack of local financial strengths' impact in citizens' participation with local governments, or lack thereof, is a focus of this study. Several additional factors regarding local relationships and perceptions can impact participation and examined for the selected nations in this study.

What's Constraining Local Participation in Decision-Making

As time has worn on and the central government has gained back its footing, the national elite have repaid the support with continued jeopardizing of district legitimacy under the decentralization plan. As a result, the role of the citizenry grows ever more important. Now, the central government is committed to the effective delivery of basic public services and improving access to quality education, healthcare, and water and sanitation by any means. This commitment combined with many districts struggling to provide only a minimum level of services has masked the lack of meaningful localization. A lack of collaboration across government agencies continues to be a major constraint. The central government has also demonstrated a desire to build capacity within the subnational jurisdictions. One example was entrusting the localities with the relatively large volume of funds (although they were highly regulated). Many agencies voiced concern regarding the localities ability to manage the large amount of monies coming

from the central government; the consensus within Uganda was that this would allow for some local ownership and the development of the capacity within subnational jurisdictions. Although some reports suggest that the real problem is a lack of capacity (to include skills, resources, and accounting abilities) most donor programs include a significant component of capacity building (IMF, 2003).

Government's Hindrances

The amount of government capacity at all levels in Uganda remains a contentious issue. A recent report suggests that corruption and weak systems of accountability remain day-to-day concerns for the public, investors, and donors. This report suggests that poor governance and unequal regional development have hindered the economic progress of Uganda (DFID, 2012). Reinikka and Svensson (2004) found that although government spending on education represents upwards of 20 percent of government spending, most of that not received by schools (captured by local officials and politicians) and their analysis indicated that schools in wealthier jurisdictions were better able to receive more of the funds directed at them. While improvements in transparency, governance, and administration have led to a continued increase in funds received by schools (by 2002 the average funds received was 80%–90% (Hubbard, 2007)) corruption continued to be a significant detractor for effective decentralization. In 2001, Transparency International classified Uganda as one of the most corrupt countries in the world.

The weakness of the judicial system suggested within the IMF reports (IMF, 2003), coupled with the Heritage Foundation Index of Economic Freedom, suggests corruption and political influence continue to bring down the effectiveness of the judicial system. Uganda has the highest bribery rate in East Africa. Experts determined corruption to be such a significant factor in the process of decentralization and in the overall improvement in the economic position

of Uganda, it is difficult to quantify its effect (Makara et al., 2009). In fact, concerns about the misuse of donations led to the UK withdrawing support in late 2012 until the completion of a full investigation. The high corruption and low level of income would support the low amount of subnational government expenditures suggested by Bahl and Wallace (2005).

The continued culture of corruption has been a leading cause of district proliferation after the revolution. Elliott Green (2010) maps each explanation for the increase in local governments (e.g., mitigating ethnic strife, local demand), debunking all but one. The most important falsified explanation for the proliferation of districts in this analysis is greater efficiency in service delivery. The intuitive cause of more districts would be a closer position of officials to the concerns of different populations on the ground. The more local governments, the smaller the area they have to cover, the more voice each citizen would have potentially have. This was under the assumption that human and technical capacities would remain constant. Unfortunately, when you split districts, you also split the group of people qualified to run the government. Using the UN's Human Poverty Index for the years 1996 to 2003, Green found no statistical difference between new districts and others (2010). The one explanation the author was left to assume as true, is patronage. The creation of a new district means the central government has new positions they can reward to loyal politicians, and a higher concentrated presence in an area.

Who Can Bring About Change?

There is a history of a bloated and ineffective government systems forcing local Ugandans to work around administrations. During Obote and Amin, when patronage and unqualified staff filled the government, populations created parallel informal institutions to compensate and stay constructive. Organizations such as Parent-Teacher Associations and user-fee healthcare clinics helped to maintain the social stability absent from the government sector

(Brett, 1994). Forty years ago, these ad hoc, alternative institutions sought to bolster social and economic survivability through non-sanctioned local council authorities and black markets. Today, the state of Uganda has economically recovered from the pre-NRM decades through market liberalization. The promotion of local participation in civil society organizations and non-profits of late and the growing faults at the district level has produced local non-governmental sectors intended to work where local officials cannot because of national restrictions, mishandling of resources, or lack of skills. The alternative institutions persisted into the creation of the current government. They can and are being harnessed to bring local change to districts; however, if the local is absent, the sustainability is questionable in a one-sided relationship.

A key change-maker for more local participation and power would be a competent and capable local government staff. However, the lack of requiring areas applying for district status to have properly assessed the feasibility of self-sustainability is well-documented. The increase in local positions (100% increase in 15 years) without a representative expansion of oversight resulted in 2007 having local government being the third most corrupt institution in the country (Okidi and Goluba, 2008; Muhumuza, 2008). One explanation is that the local governments cannot acquire the human capital necessary to effectively provide public services. The proliferation of districts (33 to 111 in 25 years, with more planned) continues to divide the number of qualified employees into new local government systems (each district with five levels of councilors and support staff suggest problems with administrative density). Adequate staffing of district positions is a difficult feat, as local government jobs comprise 75% of the public workforce (Okidi and Goluba, 2008). With a literacy rate around 70% and 35% under the poverty line, job vacancies often draw in potential councilors and staff without a confident understanding of the government system or the national language, English.

The lack of capacity is understandable as, “local politicians as well as civil servants are often inadequately trained for their responsibilities, which is not surprising given the low level of education in Uganda” (Steiner, 2008, p. 60). Individuals with capacity for one position are overwhelmed when they are required to handle roles left vacant at the district or are filled with those unqualified. (Lambright, 2011). Those who understand both Uganda's public policy system and English typically have three options: 1) reject the local government in favor of a position in the private or non-profit sectors or the national government; 2) take a local government job in hopes it can be financially exploited; or 3) take a local government job out of public service (Muhumuza, 2008). There are arguably the fewest qualified applicants in this third category, and those who decide on a local government job often find themselves burdened with extra duties for positions the district is unable to fill (Lambright, 2011). The impact of district inflation is needed to understanding failures in the decentralization process and how a democratic government closer to the “people” can lead to more inefficiency.

Those nongovernmental organizations at the local level, depending on the environment, may find themselves in unison or at odds with local government policy causing rifts in governance. The impediments these alienated organizations can make for local government can be relative to the financial and local public support they have. For instance, as Uganda has moved to recentralize government and curb local government capacity to deliver services, there has been a growing role in governance for nongovernmental community organizations. Local governments in partnership with nonprofits and other organizations would adopt responsibilities conducive to their own purpose statements to implement a government program (Hjern and Porter, 1981). Several nonprofits have already initiated good governance policy workshops for districts (Onyach-Oloa, 2003). The promotion of “governance” provided by both governmental

and nongovernmental providers has arguably begun to remediate inadequacies in district capacity.

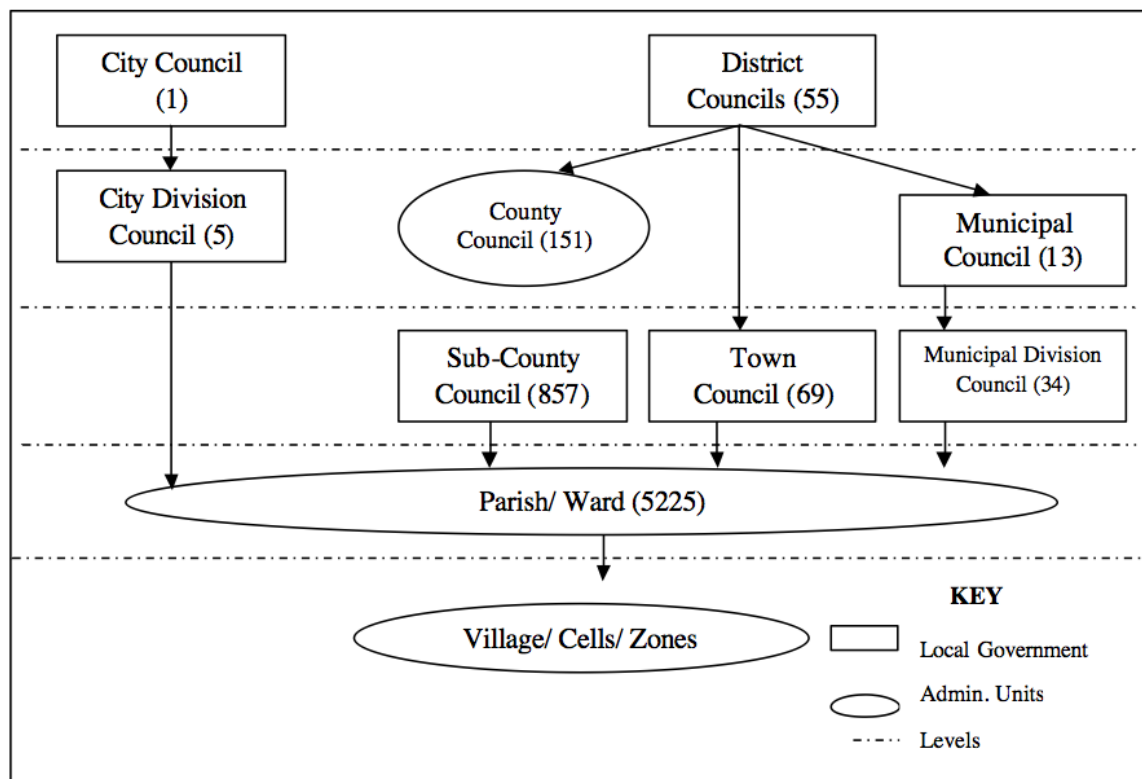
UGANDA Appendix

Table 1: Local Government System

| Local Government System | | |
|-------------------------|--|-----------------------------|
| Division | Local Government Council | Administrative Unit Council |
| Rural Area | District & Sub-county | County & Parish & Village |
| Urban Area | City Council & City Division Council | Parish/Ward & Village |
| Municipality | Municipal Council & Municipal Division | Council parish/Ward |

Note: from the Uganda, Ministry of Local Government website

Figure 4: Structure of Local Government in Uganda



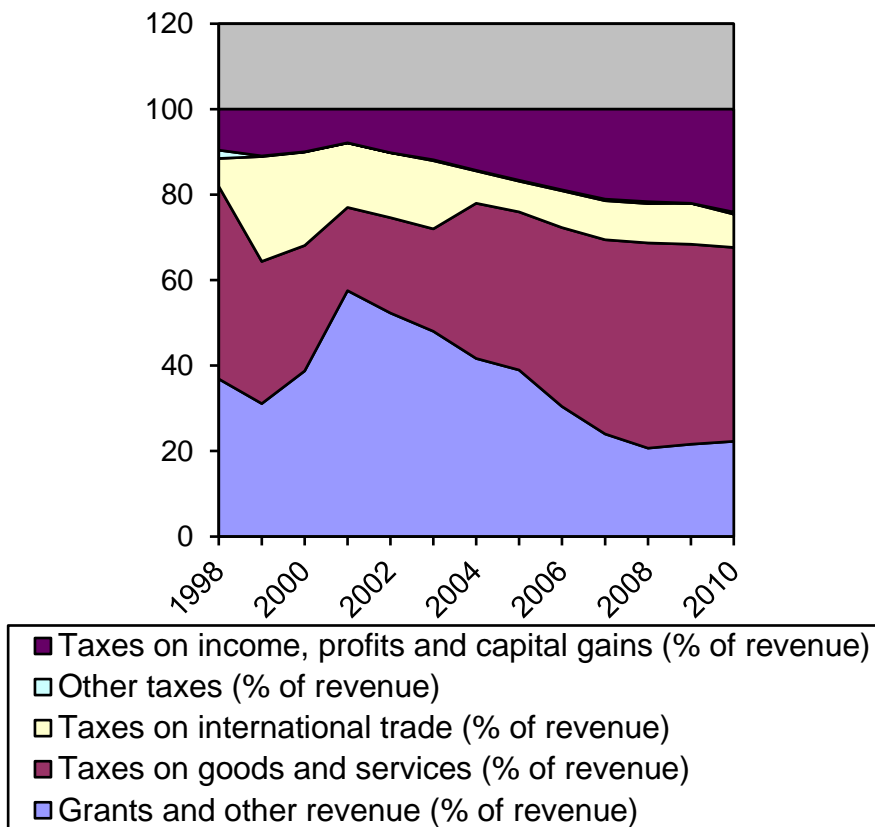
Source: Steffensen, Tidemand, and Ssewankambo (2004).

Table 2: Revenue sources as a percentage of total

| Indicator Name | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Grants and other revenue (% of revenue) | 36.9 | 31.1 | 38.7 | 57.5 | 52.3 | 48.0 | 41.7 | 38.9 | 30.5 | 24.0 | 20.7 | 21.6 | 22.3 |
| Taxes on goods and services (% of revenue) | 45.1 | 33.3 | 29.4 | 19.5 | 22.3 | 24.0 | 36.3 | 37.1 | 41.9 | 45.4 | 48.1 | 46.8 | 45.4 |
| Taxes on international trade (% of revenue) | 6.5 | 24.5 | 21.8 | 15.1 | 15.2 | 15.9 | 7.5 | 7.2 | 8.6 | 9.1 | 9.2 | 9.6 | 7.8 |
| Other taxes (% of revenue) | 1.9 | 0.2 | 0.1 | | | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 | | 0.5 |
| Taxes on income, profits and capital gains (% of revenue) | 9.6 | 10.9 | 9.9 | 7.9 | 10.2 | 11.8 | 14.3 | 16.6 | 18.8 | 21.0 | 21.6 | 22.0 | 24.1 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

¹retrieved from <http://www.dfid.gov.uk/News/Latest-news/2012/Uganda-UK-suspends-aid-to-government/>

Figure 5: Revenue Sources by type



Ghana

Central Government

Ghana is a fledgling democracy that has only been under the current constitution since 1992. J.J. Rawlings first took power in 1979 and again in 1981 and held power partially using military force until the first election in 1993. He then retired from the armed forces to run for the Presidency under the new constitution. President Rawlings served a complete term for the first time in 1996 and their first peaceful transfer of power was in 2001 to the main opposition party (Boko, 2002). The executive has returned to Rawlings' party, National Democratic Congress (NDC), through fair and peaceful elections with President Mahama assuming the post in 2012. In total, there have been two peaceful transitions of power between the two major political parties in Ghana (NPP and NDC), since the instatement of a multi-party democracy in 1992. In 2010 they began a review of their constitution and began producing and exporting oil. The latter is historically detrimental to developing African countries as a "resource curse" experienced by Angola, Nigeria, and others (Collier, 2007). In the past, the massive influx of revenue from natural resources, coupled with the weak institutions of government and accountability, have deteriorated rather than developed political systems.

Current Political and Fiscal Policies in Place

Decentralization policies have degenerated into increasing concentration of power and resources in key central ministries, departments, and agencies to the detriment of subnational jurisdictions. The central government's annual budgets are increasingly being couched mostly in terms of ministries, departments, and agencies, with a rare mention of local governments. Only 49 percent of the grants to subnational governments are under the discretion of the localities. The government made several attempts after the passage of the 1992 Local Government Act (Act

462) to integrate all civil servants at the local level into one personnel management system, but all failed because of opposition from the central government. This undoubtedly would limit their ability to provide benefits to those who supported their election. The bill for the Act was held up for 10 years until donors made its enactment a condition for the release of budgetary support (Koranteng & Larbi, 2008). In 2005, Ghana enacted a compromise policy (LGS Act 656), but it created a very weak local government system that centralized government agencies like education, health, forestry, fire, game, and wildlife (Awortwi, 2011). This is a step backward in the country's efforts to decentralize the public services and an antithesis of the principle of subsidiarity (Secretariat, 2011).

In Ghana, there are three levels of government: the national, regional and the metropolitan/municipal or district levels. The sub-national government structure comprises ten Regional Coordinating Councils, 110 Metropolitan/Municipal/District Assemblies (MMDAs) and Town/Area Councils and Unit Committees (Inanga & Osei Wusu, 2004). This District Assembly (DA) system provides very little control to local governments. The local government consists of a regional coordinating council, a four-tier metropolitan and a three-tier municipal / District Assembly structure. Metropolitan Assemblies have populations over 250,000, Municipal Assemblies over 95,000 and Districts with over 75,000. District Assemblies have the responsibility for the overall development of the District. District Assemblies, therefore, have legislative and executive functions and they formulate and implement a development plan and budget, both subject to the central government (Goel, 2010).

Despite this requirement, the Metropolitan, Municipal and District (MMDAs) have limited sources of revenue for carrying out their activities. The sixth schedule of Act 462 lists the revenue sources of local government bodies to include entertainment duty, casino revenue,

betting tax, business registration charges, gambling tax, rates and levies, fees, licenses, as well as taxes chargeable on the income of certain categories of self-employed persons. There are also miscellaneous receipts such as stool land revenue, fees for dislodging of latrines, a collection of sand and stones and others. However, the internally generated revenues do not yield much revenue, not even for the recurrent expenditure and so most Districts depend entirely on the District Assemblies Common Fund (DACF) and other grants from the Central government (Dick-Sagoe, 2012). Ghana's Appendix includes other legal instruments that seek to strengthen decentralization and for that matter fiscal decentralization.

The DA's obtain over 85% of their revenue from central government transfers and donors. Most of the central government funding represents non-discretionary funding for salaries (Fox et al., 2011). DA's also lack the ability to pursue additional revenue through income taxes as this is the domain of the central government. While the DA's are responsible for annual plans, that include budget submissions, they are dependent upon central government appointees to develop the plans. The plans themselves are also subject to cabinet approval. Technically, the budget plans are submitted to a regional level (Regional Planning Coordinating Units), that in turn submit them to Regional Coordinating Councils for approval. This council then sends the plans to National Development Planning Commission that is responsible for consolidation of the plans into the national development plan which is submitted for approval to the cabinet. The Constitution establishes the National Development Planning Commission (NDPC) and requires that it be composed of a minimum of 14 persons including the Minister of Finance, the Governor of the Central Bank, and the Government Statistician. The President is authorized to appoint an indefinite number of persons to the NDPC, and the NDPC is responsible to the President (CRC, 2011). This further underscores the power of the executive branch. In 1994, two laws, National

Development Planning Commission Act and the National Development Planning (Systems) Act passed that emphasized the advisory role of this commission. This has the effect of making the commission's recommendations unenforceable. Figure 6 and Table 3 in the country's Appendix outline the responsibilities and relationships respectively between the levels of government. It is noted that the only fiscal autonomy provided for is within own source revenue while the only service delivery is that which is legislated. As suggested by Mullins (2004) decentralization would appear to provide greater local authority and autonomy, however structure alone does not ensure appropriate implementation.

There is very little available information on the specific amount or categories of expenditures at the sub-national level. As identified by Ghana (2008), the constitution expressly lays out the framework both for decentralization and expenditure assignment and further supported by numerous laws. According to Ghana's Intergovernmental Fiscal Decentralisation Framework, "Expenditure assignments to the local governments shall be in accordance with the principle of subsidiarity, where tasks are transferred to the lowest possible level closest to the people. The expenditure assignment shall be well defined for each tier of governance to pursue efficiency and accountability" (Ghana, 2008, p.4). Table 4 identifies the categories of expenditure and total annual amounts (aggregate). As previously indicated, despite the clarity of the constitution, the central government continues to maintain control over most of the decisions, management, and finances that should be the responsibility of localities. Since 1995, the central government has assumed responsibilities for salaries as well as pensions of district staff provided, they fall within the approved manpower ceilings of the assemblies. The central government funds other operational and administrative expenses of the assemblies.

Who Holds the Decision-Making Power

Within the constitution of Ghana, Article 35 (6d) states that the state shall make democracy a reality by localizing the administrative and functional machinery of government to regions and districts and by affording all possible opportunities for people to participate in decision-making at every level in national life and in government. Article 240 (1 and 2e) states that local government and administration shall decentralize as far as practicable and that the functions, powers, responsibilities and resources transfer from the central government to the local government. The district assemblies have the overall responsibility for the operation of all development agencies in the District including the central government ministries, departments and agencies, and non-governmental organizations. They execute this responsibility through coordination, integration, and harmonization of activities of all development agencies and governmental organizations (Dick-Sagoe, 2012). Article 240 (b) intends to provide local autonomy and proposes measures to enhance the capacity of local government authorities to plan, initiate, coordinate, manage and execute local policies. In step with the need for local participation and accountability, article 240 (2e) clearly states that to ensure accountability of local government authorities, people in particular local government areas shall, as much as practicable, be afforded the opportunity to participate effectively in their governance. Section 240 (2c) of the Local Government Act, 1993 (Act 462) and the constitution, Section 245b provides that each local government unit shall have a sound financial base with adequate and reliable sources of revenue.

Localization has been ongoing since the enactment of the constitution in 1992. Awortwi (2011) suggests that fiscal powers followed administrative than political. Although Ghana has been a very successful democracy, Fox et al. (2011) suggest that there is a problematic

concentration of power within the executive branch. This is primarily from a highly competitive, ‘winner take all’ structure where either of two dominant parties could legitimately be the winner. For this reason, both parties act to maintain the status quo. The patronage system and the reliance on natural resources for income has further strengthened this problem. The President appoints 30% of District Assembly councillors, traditional authorities (Chieftans) are unable to stand for office, and the central government also appoints the most influential position, the DCE. The following quote clarifies the current situation in Ghana: “In Ghana’s recent history, national development has been geared towards the fulfillment of election promises mainly contained in political party manifestos, rather than towards an all-inclusive program of ensuring social and economic progress. This tide must be stemmed by a plan which supersedes such manifestos” (CRC, 2011).³

Decentralization in Practice

Although the framework of the constitution specifically provides for decentralization, the implementation has been problematic. The election itself is problematic as it starts with local elections being paid for by the central government and administered by the Electoral Commission. Administrative and political decentralization are almost nonexistent with nearly all the government employees at the local level being representatives of the central government (Fox et al., 2011). Nearly all government employees are accountable to their specific ministry and none are particularly responsible to the public. Though the DAs are required to hold at least three formal General Assembly meetings each year for decisions pertaining to the district, the Executive Committee conducts the bulk of the work under the direction of the DCE, and a few

³ Ghana has just held elections and saw a change at the national level.

administrators also appointed by the central government (Crawford, 2008). Consequently, the winning party at the central level can control all District Assemblies, because the positions they appoint hold all the authority in the DAs. Arguably the system now being practiced in Ghana is a deconcentration of central power rather than a devolution to subnational governments (Inkoom, 2011). The large number of district assemblies and the small geographic size of Ghana suggests a high level of fragmentation. This could diminish the efficiency of decentralization (Martinez-Vazquez, 2001).

A review by Inanga and Osei Wusu (2004) found that recurrent expenditure transfers accounted for about 32 percent and 41 percent of total district revenues, respectively. Local governments are expected to deliver 86 functions including basic education, primary health care, agriculture, sanitation, water, roads and streets (Issah, 2011). The reality, however, is that the central government keeps most of these functions except waste management either due to the lucrative returns or managerial capacity issues (Common Wealth Secretariat, 2010). Given the significant poverty level of Ghana, and a lack of even basics such as the naming of roadways, it is more likely that the benefit of decentralization will be more efficient provision of goods and services rather than differences in the quality of services.

What's Constraining Local Participation in Decision-Making

A report by the Commonwealth Secretariat (2011) places a large emphasis on the notion of the subsidiarity principle. Their analysis suggests that although legal framework was strong, the perversions within the political process were overpowering. The distribution of natural resources (gold, cocoa, oil) which create a concentration of wealth and political control within the south region (Fox et al., 2011) are likely a significant driver of the central government's desire to maintain control. Now, Table 5 demonstrates the lack of interest in local elections. This

apathy makes it more difficult to generate interest in gaining popular support to initiate changes in the political system that would allow for greater local responsiveness and a more decentralized system. If the purpose of decentralization in Ghana was to bring development, and this is defined, “through progressive elimination of poverty, unemployment, and inequality” (Inkoom, 2011), then Ghana’s current status is bleak.

In lockstep with a demand for more discretion and responsibility at subnational levels, the central government is not providing administrative support in building the capacity and infrastructure of the local bodies (Inkoom, 2011). The allocative efficiency potentially gained by decentralization is lost when technical efficiency is non-existent. Crawford (2008) found a complete collapse of Unit Committees and Area/Town Councils resulting from neglect by the central and district level governments. Focusing on two particular districts for study, the author found that only nine out of twenty-two UCs and two of eight Area/Town Councils still existed after only a two-year span. Article 240 of the constitution, “directs the parliament to enact laws to enhance the capacity of local governments, and to ‘ensure that functions, powers, responsibilities and resources are at all transferred from the Central Government to local government units in a coordinated manner” (Boko, 2002). However, central and district bodies, rather than support lower officials with trainings and adequate resources to better help their constituencies, starved the coffers of UCs and ACs until they died.

The central government has held persistent control in steering subnational budgets and expenditures and highlights the Ghana case as one with structural mistakes made in fiscal decentralization. Those in power at the national level have exerted continued conscious effort to manipulate the past 20 years of implementation to recentralize government. Crawford (2008) states, “it is paradoxical and somewhat naïve to place one’s faith in the commitment of central

governments to genuinely devolve power, especially given the truism that governments rarely give up their power voluntarily. The politics of decentralization are crucial” (135). When Rawlings handed over power to the opposition party’s leader, Kufuor, the new president dismissed every one of the DCEs, regardless of experience and remainder of the term, appointed party loyalists. Commitment to political control outweighs any potential commitment to development/poverty alleviation through a decentralization of powers to moderately independent local officials responsible primarily to their constituencies.

Who Can Bring About Change?

Joint Government of Ghana and Development Partner’s (2007) Decentralisation Policy Review identifies the improvements that have occurred over the last 10 years in Ghana as well as the level of detail within the legal system, the challenge of the power of the executive branch and the resulting shifts in power remains the drag on any meaningful reform. The Ministry of Local Government developed an extensive framework (Ghana, 2008) that provides a clear roadmap for improvement. The Constitutional Review Committee’s report repeated many of the same issues. A great deal of the CRC’s findings and recommendations revolve around insulating institutions and services from political fluctuations. A call for greater local autonomy was clear with respect to greater bottom-up participation in national planning by the Commission. However, there is still a growing frustration for the constant shifting between the two presidential contenders and the ripple effects in governmental stability. The Commission observes that,

... in Ghana one of the greatest scores of interparty and governmental castigations and disappointments that emerge after governmental change-over is due to national indebtedness emanating from governmental expenditure and spending on projects which

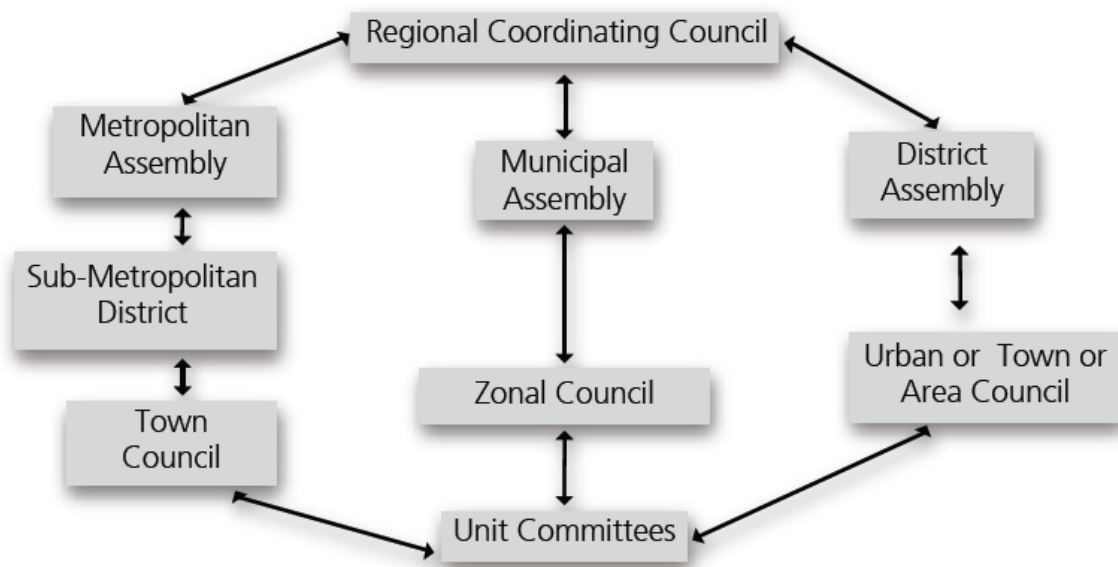
are often abandoned when a new government comes to power. This is attributable in part to the absence of a national development plan. (CRC, 2011, p. 48)

Project stability based upon the political party in power staying in power causes dependency and doubt in government's effectiveness.

It seems unlikely that without considerable pressure placed upon the central government to move away from the winner take all system and allow for the implementation of the constitution and the recommendations that have been provided repeatedly there will be no further changes within Ghana. Though local citizens are unable to hold government office, the most effective and instantaneous stimulant for local participation would be through the traditional chieftains. The call for change in a democracy needs to have some foundation in the general population and, as previously stated, this is unlikely. Inkoom (2011) describes participation at the community level as already low with community-based and civil society organizations lacking the ability to hold government officials accountable.

GHANA Appendix

Figure 6: Local Government Structure



Source: *Introduction to Ghana's Local Government System, ILGS, 2008*

- (1) Local Government Act, 1993 (Act 462),
- (2) Local Government Service Act, 2003 (Act 656),
- (3) National Development Planning (Systems Act) 1994 (Act 480),
- (4) District Assemblies Common Fund Act, 2003 (Act 455),
- (5) Public Procurement Act, 2003 (Act 663),
- (6) Audit Service Act, 2000 (Act 584),
- (7) Internal Audit Agency Act, 2003 (Act 658),
- (8) Financial Administration Act, 2003 (Act 654),
- (9) Financial Administration Regulations, 2004 (LI 1802).

List taken from (Ankamah, 2012)

Table 3

Functional Relationships and Levels of Autonomy

| Characteristics | National Government | RCC's and MMDA's |
|----------------------------------|---|---|
| Broad Relationship | <ul style="list-style-type: none"> Intervention into local government roles are through local government channels. | <ul style="list-style-type: none"> Discretionary authority, bound only by broad national guidelines, and the human, financial and material capacities available to them. |
| Organisation Structure | <ul style="list-style-type: none"> Policy and planning guidelines in regard to local government services. | <ul style="list-style-type: none"> Autonomy to design their policy, planning and operational structures |
| Policy and Planning | <ul style="list-style-type: none"> Policy and planning guidelines in regard to local government services. | <ul style="list-style-type: none"> Within their discretionary powers, full responsibility for determining policy, planning and operational procedures which should be informed by national policies and priorities. |
| Financial Structure | <ul style="list-style-type: none"> Independent except through linkage, revenue sharing and/or transfer payments. | <ul style="list-style-type: none"> Autonomous except through linkage, revenue sharing and/or transfer payments. |
| Fiscal Policy | <ul style="list-style-type: none"> Central government responsibility but may be affected by the extent to which revenue generation and expenditure responsibilities have been devolved to the local governments. | <ul style="list-style-type: none"> Guided by the policies of the central government. |
| Revenue Generation | <ul style="list-style-type: none"> Generates revenues within its assigned taxing area. Undertakes revenue-sharing with and/or transfer payments with/to local governments. | <ul style="list-style-type: none"> Generates revenues within its assigned tax regime (MMDA's only). Should receive transfer payments from central government. |
| Budget Preparation | <ul style="list-style-type: none"> Prepares and approves the central government budget in accordance with its legislated responsibilities. Prepares budget guidelines for local governments. Compiles consolidated budget for both central and local government. | <ul style="list-style-type: none"> Prepares and approves integrated budgets in accordance with its targeted responsibilities. |
| Financial Management and Control | <ul style="list-style-type: none"> Independently manages and control own finances. Performs external audit functions for the local governments. Compiles monthly and annual consolidated financial reports for central and local government. | <ul style="list-style-type: none"> Manages and controls own finances. Audited by external auditors in accordance with legislation. Prepares and / or compiles monthly and annual financial statements. |
| Public Sector Staffing | <ul style="list-style-type: none"> Central government responsible for human resource policy. Central government responsible for all aspects of human resource requirements within Central government. | <ul style="list-style-type: none"> Responsible for all aspects of human resource management subject to general labour standards including: hiring, firing and rationalisation of manpower. |

Table 4

Summary of Government budget expenditure

| <i>Gh¢ Million</i> | | | |
|--|-----------------|-----------------|-----------------|
| | 2007 | 2008 | 2009** |
| 1 RECURRENT | 3,228.00 | 4,468.53 | 4,904.32 |
| Non-interest expenditure | 2,787.99 | 3,789.36 | 3,872.00 |
| Wages & Salaries | 1,418.78 | 1,987.64 | 2,478.69 |
| Goods & Services | 564.97 | 648.49 | 621.18 |
| Transfers | 611.76 | 685.60 | 603.85 |
| <i>Pensions</i> | <i>109.60</i> | <i>149.00</i> | <i>186.21</i> |
| <i>Gratuities</i> | <i>45.48</i> | <i>52.89</i> | <i>65.47</i> |
| <i>Social Security</i> | <i>133.05</i> | <i>159.64</i> | <i>156.86</i> |
| <i>National Health Fund (NHF)</i> | <i>291.82</i> | <i>256.50</i> | <i>153.48</i> |
| <i>Other transfers</i> | <i>28.12</i> | <i>47.72</i> | <i>41.83</i> |
| <i>Subsidies to utility companies</i> | <i>3.69</i> | <i>19.85</i> | <i>0.00</i> |
| Reserve Fund | 192.48 | 467.63 | 168.27 |
| Interest Payments | 440.01 | 679.18 | 1,032.32 |
| Domestic | 322.19 | 481.93 | 773.50 |
| External (Due) | 117.82 | 197.25 | 258.82 |
| 2 CAPITAL EXPENDITURE | 1,630.22 | 2,481.16 | 2,425.73 |
| Capital (domestic financed) | 903.80 | 1,564.77 | 799.11 |
| Development | 902.85 | 1,564.77 | 799.11 |
| <i>Education Trust Fund</i> | <i>143.42</i> | <i>204.09</i> | <i>139.02</i> |
| <i>Road Fund</i> | <i>102.64</i> | <i>102.92</i> | <i>119.06</i> |
| <i>Petroleum Related Fund</i> | <i>2.69</i> | <i>2.76</i> | <i>3.84</i> |
| <i>Dist. Ass. Common Fund</i> | <i>143.00</i> | <i>252.08</i> | <i>153.50</i> |
| <i>Other cash expenditure</i> | <i>511.10</i> | <i>1,002.92</i> | <i>383.70</i> |
| Net lending | 0.94 | - | - |
| New loans | 0.97 | - | - |
| Loan recoveries | -0.03 | - | - |
| Capital (foreign financed) | 726.42 | 916.39 | 1,626.62 |
| HIPC financed expenditure | 203.20 | 185.24 | 205.00 |
| MDRI financed expenditure | 183.81 | 93.64 | 82.99 |
| 1+2 TOTAL EXPENDITURE & NET LENDING | 5,245.23 | 7,228.56 | 7,330.05 |

** provisional

Source: MoFEP

Retrieved from <http://www.statsghana.gov.gh/docfiles/Key%20social%20statis/MacroeconomicDigest.pdf>

Table 5

| Voter turnout in national and local government elections (Ghana) | | | | | |
|--|------|------|------|------|------|
| National election (year) | 1992 | 1996 | 2000 | 2004 | 2008 |
| Voter turnout (%) | 50.2 | 78.2 | 60.4 | 81.5 | 69.5 |
| Local election (%) | 1988 | 1994 | 1998 | 2002 | 2006 |
| Voter turnout (%) | 59.3 | 29.3 | 41.6 | 32.8 | 44 |
| Source: (Awortwi, 2011) | | | | | |

Tanzania

Central Government

Tanzania finds itself in the middle of a transition from socialism to a more capitalist democracy. As time fades parts of the legacy of nationalism and African socialism, the new liberalized regime is developing and adjusting to the growing pains of a transitional nation. Using socialist/nationalist institutions' effects on the emerging nation, promoted by international actors (IAs), is not a topic with comprehensive research. Tanzania saw a new wave of liberalization with the swearing in of Mkapa in 1995. Though little has been done in terms of political devolution, after decades of socialist policies crippling all economic sectors, the Chama Cha Mapinduzi or CCM (the hegemonic party and formerly Nyerere's TANU) began reforming their trade and other international policies to be more conducive to financial security and appealing to western investors. The push for reform was a welcomed change to the international community.

Though the financial markets of Tanzania were sufficiently criticized during the Nyerere years, socialism manifests as a social construct, not an economic one. In one of his many essays on the subject, Nyerere poignantly states, "Socialism-like democracy-is an attitude of mind" (1962). The purpose of the leader's reforms was first and foremost to promote the unity of the people to enhance development, as he again writes, "Roads, buildings, the increases of crop output, and other things of this nature, are not development; they are only tools of development" (1968). The idea of a united country, free of hindrances based on race or ethnicity, was a concept embraced by several influential people in Tanzania. It is this ideology of unity of all citizens which helps continue to hold the peace today and spurred the past frigid times between the socialist country and the capitalist INGOs. The failure of early projects by the World Bank

and others left the government pessimistic of any benefits gained by external interference and promoted instead “self-reliance”; while the international actors saw the spread of nationalization of banks and profitable industries as direct threats to their market-based agenda (Payer, 1983). Interestingly, the nation had made their decision to reduce contact based on relevant experience and the IAs exercised ideology and future speculation.

Tanzania has a long history of attempts at decentralization. Though the country has in the past held problematic ideology for the World Bank and others, extraordinary and unsettling moments have occurred for partnership. The horrendous ordeal of the Ujamaas cannot be overlooked as part of Tanzania’s history. The experiment helped destroy much of the economy and resulted in the forced mobilization of 11 million people (Meredith, 2011). In the first year of the mistake, international aid increased by 50 percent and then doubled in 1975 to help the citizenry negatively affected. However, what was considered the darkest years of Nyerere’s reign was also a time of highly engaged support of international actors.

As a contrast, Uganda is historically a centrally focused country, with one ethnicity ruling the area during colonialism and then dictators playing ethnicities against one another, followed by immediate decentralization by a resistance movement within a nation with no infrastructure and quick recentralization. While, Tanzania experienced a decentralized government as early as when Britain gained control after WWI, had a strong central power forcing both decision-making at the village level and national unity, has never witnessed a violent revolution, and has peaceful and stable relationships with sub-national units, and the semi-autonomous island of Zanzibar (Mukandala, 1998).

One of the main sources of influence that Nyerere and the TANU used to circumvent the ethnic divisions found in many parts of the country was the promotion of a single national

language. In 1967, Nyerere's regime, using the Education of Self-Reliance policy, the government gained control of all levels of education and steered learning toward the beliefs and values held by the national socialist government with the help of Swahili (Campbell, 1999). Leading figures presently in the CCM, including President Kikwete, were educated and reared during the push for Tanzanian socialism by Nyerere. This fact is interesting when one considers they control the political and economic environments in which contains the citizenry. Though Kikwete and Mkapa have liberalized several aspects of the country, the strong ideology toward nationalism and strong government in social structure is still present. The legacies of Nyerere's socialist and nationalist institutions (formal and informal, physical and mental) have helped the country curb several of the criticisms toward a continued strong central government.

Current Political and Fiscal Policies in Place

There are two primary sources of revenue to the government of Tanzania. The first is domestic revenues which include both tax and non-tax revenues and the second is in the form of external assistance. Outside agencies provide external assistance and is outside the scope of this paper. Tax revenues make up the majority of the central government's revenue. These taxes are collected by the Tanzania Revenue Authority (TRA), established by the Ministry of Finance in 1996. They are responsible for the collection of the Income Tax, Value Added Tax, Import Duty and Excise Duty taxes.

Table 6 (found in Tanzania's Appendix) provides an overview of the amount and percentage of the contribution that each taxable category provides to the central government. The importance of the VAT is undeniable. Although they represent quarterly receipts, Tables 7 through 10 provide useful information, identifying the specific revenue items broken down by income tax (Table 7), VAT (Table 8), customs and excise (Table 9), and large taxpayers (Table

10). Looking at the income tax, the importance of limited companies and semi-state-owned companies as nearly half of income tax revenue is noteworthy. The wide variation in capital gains could suggest the cyclical nature of these taxes. The VAT table provides greater insight on the specific types of VAT. Table 6 provides some indication of the differences in revenue collection across the regions. This improves if there was more information on the formula used by the central government to provide intergovernmental transfers. This would suggest that if these regions collected a proportional level of locally collected fees, that there would be a significant disparity in their revenue.

As a percentage of GDP, external aid increased from 4.2% in 1985, the last year of Nyerere's regime, to 17.4% in 1990 (Mwasa and Ndulu, 2008). The new policies have seen several successes when it comes to base economic indicators. Since 2000, Tanzania has experienced a tripling of the per capita GDP (255,575TShs in 2000 compared to 770,464TShs in 2010) ("National Accounts," 2011). The dramatic increase over only 9 years demonstrates the country's high level of performance in terms of economic policy. First, the country has remained relatively peaceful since independence (with the Kenya bloodshed of '07/'08, Tanzania is the last in the East African Community to make that claim). Second, despite the peace, Tanzania has had rocky relations with the World Bank caused by the secondary effects from nationalism on Tanzania's free liberal market. Also, in comparing the nation with Uganda, the separation between failed localization because of patronage /corruption and failure because of ongoing national identity and a centralized ideology clarifies the situation. Beyond the general discussion on revenue assignment, unique areas of focus for the Tanzania case are natural resource management, with the expanding mining of gold, and the lasting effects of nationalism.

Regionally, the Regional Administrative Secretariats, also part of the central government, collects fees for food establishments and revenue from public property. While the larger sources of revenue are collected by the central government, local governments are mandated to collect the following taxes, levies, and fees: property rates, crop taxes, forest produce taxes, license fees (e.g. fishing, liquor, taxi, vehicle). Although specific data on the amount of these fees is not available, the use of fees at the local level is consistent with good tax policy (Bird, 1999; Bird & Wallich, 1993). These revenues are not payable to the central government and used by the subnational governments as they see fit.

The Public Expenditure Review (PER) guides the expenditure side. Composed of the Ministry of Finance, President's Office for Planning and Privatization, Public Service Management, and Regional Administration and Local Government, various sector ministries, the Bank of Tanzania and the TRA, the PER was first initiated in 1998/99. The goal of the group is to improve the budget management. The most recent available report on the government website is from 2004. This report suggests that local governments are transitioning to compliance with international budgeting standards and they have adopted a formula based recurrent grant transfer system. It also clearly outlines the Central Government expenditure and priorities. The Central Government provides most of the funding for local governments. This includes the salaries for all government employees, and recurring grants for agriculture, education, health and water, roads and administration.

Along with international aid, Foreign Direct Investment has become a main pillar of Tanzania's development. In lockstep with the reforms of 1995, the Mining Code of 1998 restructured the mining sector to negate fears of nationalization. The code intends to promote stable relationships between business and government by creating a list of guidelines and levels

of conduct expected during their negotiations and day-to-day encounters. During his explanation of why his company, MDN, was looking to place more investment in Tanzania, company adviser Richard Corbo stated, “Their business practices are quite good compared with other countries. There is still pretty heavy bureaucracy- it’s a long process- but it’s efficient and it’s better than average” (Saywell 2008). The new liberalized policies are why the United Nations Conference on Trade and Development (UNCTAD) deemed Tanzania the most liberal investment regime in Africa, outside South Africa (Mwasa & Ndulu 2008), and FDI Magazine deemed it the top African country in 2006 for economic potential, once again outside South Africa (Lu & Marco 2010).

Thanks to the relationships between the companies and the government, the mining sector has experienced incredible growth since the switch from socialism to a more liberal capitalist economy. Since 1996, the sector has grown on average 16% per year (Mwasa & Ndulu 2008). As a result, the World Bank estimates gold mining now accounts for around 30% of Tanzania’s export revenues (World Bank, 2009). However, dependency on the sector for continuing growth of GDP is not as alarming a concern once it is compared to Nigeria’s dangerously high dependence on oil for 98% of export revenue (Bahaji et al. 2011), and 32% for mineral export in the highly stable country of South Africa (“Gold” 2005). Another reason to be optimistic is the healthy growth found in other sectors such as “Communications” at 20% and “Financial Services” hovering around 10% (World Bank, 2009). Discussed below, there are dangers found in one sector expanding too fast and dominating a country’s total exports. Nevertheless, the central government of Tanzania could relieve the risk by slowing down new contracts to mining companies and instead allow other potential sectors, which have a direct effect on development, to expand.

Who Holds the Decision-Making Power

The study cannot overlook the state's control over culture. The main instrument socialist countries use in order to control their populous are forms of dialogue, talk, and language that appeals to the masses and supports their buy into the philosophy, as the physical gains are obviously limited. The ability to control culture through policy, education, and language through the specific tone of propaganda allow a government to manipulate groups and individuals, down to how an individual family unit operates. Stated rather eloquently, "In Tanzania, as in other post-socialist settings, government efforts to pervade all social arenas through the extension of state responsibilities, down through various levels into virtually the household itself, have contributed to the establishment of cultures of local governance" (Green, 2010, p. 29).

Patronage is an area in which the central government is attempting to make positive change. After the abolishment of the development levy for district local revenue in 2003, the central government meant to supply 20% of the national budget to district governments (Mwasa & Ndulu 2008). While the central government is supposed to use guidelines for distributing block grants, they have yet to be created and there is still a system of reward and reprimand. Examples of the 2004-2005 budget shares for districts are a decrease in expenditures of 22% for both Musoma and Mwanza municipality, while Biharamulo received a 24% increase, indicating exorbitant support for the ruling party (Weinstein, 2011). Following the author's explanation, the districts received reprimands for supporting opposition or not supporting the CCM enough (i.e. not supporting the party substantially over 50% in recent elections). The disunity of budgeting for resource-rich districts exemplifies the control in the central and the lack of power at the local level.

Decentralization in Practice

As in other African countries, the central government has pushed for decentralization reform but kept much of the decision-making powers resulting in a form of deconcentration. It should be noted that projects such as the Local Government Reform Programme (LGRP) and the Local Government Support Project (LGSP), sponsored and funded by the World Bank, were meant to help train regional officials in how to properly administer the local government's role in the community. Despite the international financial backing of such projects, what is being refined and conditioned in these projects is more the effectiveness of carrying out national projects at the local level and not a desire to create locally derived solutions to local problems. Green found that, "What is now presented by the state as an autonomous system of local government (*serikali ya mitaa*), associated with local authorities and district councils, continues to convey the local representation of central government" (2010, p. 22). However, Tanzania does hold a history more aligned with re centralized decentralization based on the ingrained nationalism not the promotion of corruption.

Central government policy still controls budgetary regulations (Kessy, 2010). Fiscal decentralization is arguably the most important aspect of decentralization because with the purse goes the power. In his interviews with local officials, Dijk found that the leaders were not frustrated with the lack of budgetary control, as they did not view this as their responsibility (2008). Though there is currently a push for local taxation, the revenue generated within the regions still only accounts for 6% of taxes collected nationally (Fjeldstad, 2001). In fairness, there are several problems which can occur when the central government relies on local governments to generate a significant part of their budget. Besides being highly inefficient, with many local governments lacking the ability to effectively collect taxes, poor areas would be

trapped with small budgets but large problems in service delivery (“Democratic,” 2000). In response, finances being distributed from the national to local governments do not necessarily create a power shift toward recentralization and away from devolution; however, when the central government dictates to local governments how the majority of the funds are spent, districts lose a reasonable level of fiscal autonomy and act only as representatives of the central government. The final result still includes local councils being directed by the center’s vision for the nation. While the study should not undervalue the new government’s role in liberalization, the environment remaining after the end of Nyerere’s regime is a major variable that continues to support the stability and progress of the country.

What’s Constraining Local Participation in Decision-Making

Tanzania’s national government has protected against the influence of the local populations in two major ways: maintained a strong central presence in various regions and districts and withheld budgetary powers from the local officials. Each region comes staffed with a Regional Commissioner and a Regional Administrative Secretary, both of which the central government appoints and controls. While the Regional Commissioner is responsible for the law and order aspects of the local government, the Regional Administrative Secretary focuses on directing or steering the councils on how to abide by the national guidelines and criteria for carrying out their responsibilities in providing resources efficiently to the needs of the region. Though local administrations have the right to create their own policies, there is little evidence that councils do more than simply implement the instructions of the central government (Dijk 2008).

As is evident from the above information, Tanzania still holds a relatively centralized political system. The patronage found in the distribution of funds to local districts continues this

argument, as the government, CCM, rewards higher allocations of funds. The model of the centralized political economy is supposed to hinder economic growth as corruption and rent seeking creates inefficiencies and the bleeding of fiscal resources away from promoting stable non-resource markets (Kolstad & Wiig, 2009). However, the stagnation of the country's economic progress has not occurred as Tanzania continues to show steady growth and stability. Although the research should not underestimate the position of the current state in liberalization, several weaknesses in the process should seriously jeopardize the development progress of the nation. The environment which exists after the administration of Nyerere is a serious variable which helps the nation's cohesion and growth.

The lasting effect of past institutions in Tanzania is salient when one looks at the cultural aspects of the government's past ideology in socialism. As heads of state continue to reprimand traditional leaders for overreaching the role of "cultural leader," the line between culture and politics is often blurred. The CCM, previously TANU, dominated the one-party state from independence up to liberalization in the mid-90s and today. As in other African countries, specifically Uganda with the National Resistance Movement (NRM), there is still little distinguishing between the public positions of the CCM and those of the government. Those attempting to find jobs within the government often see the obligations to the political party as the same obligations to the public sector, significantly blurring the intended separation of party and governmental bureaucracy (Green 2010). If the government is still connected to CCM and the social security of the nation is still connected to the government, then CCM and its policy can be perceived as promoting the well-being of all Tanzanians. In this instance, the motivations of the CCM matter little compared to their perceived positions among the people.

Why the connection is particularly complex in Tanzania's case is the history of government manifesting the collective efforts of the general people. As previously mentioned, the government controlled the education curriculum, but they also controlled all accumulation of knowledge and culture in the country, i.e. any literature written in the country relating to the country's history, society, and contemporary political issues (Verdery 1991). With a hold on intellectual properties and all things pertaining to Tanzania, the Nyerere government was capable, as a socialist system, to direct society toward one of discipline to the national ideals.

The legacy of Nyerere in Tanzania has left local areas devoid of civil society. As the state was supposed to represent the interests of the people, there was not a need for citizens to act outside the realm of public institutions to form independent organizations. The government incorporated those organizations that did exist. In attempts to create locally based organizations, Green (2010) observed a lack of separation present between civil society and the state. Citizens still perceive local civil society and the state as one and the same in Tanzania. Civil society means to promote a medium through which the masses can make changes in the state; however, if citizens feel they are part of the government, not as an individual but as a collective, then there is less incentive to create the civil society which outside donors feel is so important to development. Despite the horrific economic failure caused by villagization and the general policies, the regime, "was successful in its restructuring of governance and the modality through which rural communities were incorporated in to the state (Green 2010)." The lack of local civil society means there are few effective outlets through which citizens can voice their concerns outside of those provided by the state, reinforcing the role of the state as part of the citizenry.

As in several developing African countries, corruption is a major issue in Tanzania. Though the nation still fairs better than its East African neighbors, Kenya and Uganda,

Transparency International ranks Tanzania 102nd out of 180 countries in the area of corruption (cited in “Tanzania” 2009). In fairness to the central government, the President Kikwete has taken several steps in mitigating the prevalence of corruption in the country. The capital has enacted programs and laws such as Finance Act of 2001 and the Public Procurement Act of 2002 (“Tanzania” 2009), to lessen the influence of power grabbing and rent seeking. As it relates to curbing corruption, the Public Procurement Act gave control over to an independent authority, assigned the title of the Central Tender Board (Odhiambo & Kamua, 2003). Based on Afrobarometer data in Tanzania from 2005, the general population greatly appreciates the central government’s reform policies. Of those surveyed, 62% believed the government was doing a fairly to very good job in combating corruption in the country.

Beyond the focus of citizens’ direct role in national policy, the structure of the government continues to promote a lack of local civil society separate from the state. As socialist states were highly reliant on bureaucratic systems, the research should assess Tanzania’s current system of public power distribution and conversely accountability. Green wrote, “Like the organizational charts that represent it graphically, government in Tanzania is essentially about levels, about the staggered hierarchical intersections of those who govern and the governed” (Green, 2010). While individual citizens are an important component of the country, they still only make up a part of the whole which is the collective mindset, which is the government of the country. The local populations still look up to the government as a structured authority for the best interests of the people, with the people at the base of the power pyramid. The local organizations, which Green witnessed an INGO attempting to coordinate into their general structural goals of empowerment of ground-level participants, were more interested in falling in

line with the expectations of the higher powers in order to gain ‘recognition’ and ‘legitimation’ (2010).

Who Can Bring About Change?

Despite having 133 tribes, Tanzania’s history of unity, from Nyerere’s Ujamaa to today’s “udugu” (brotherhood), is credited with maintaining the peace and stability of the country, politically and ethnically (Mwasa & Ndulu, 2008). Though the economic policies failed miserably, Ujamaa was able to mend the ethnic and religious divides that had been present since their independence (Bjerk, 2010). The Tanzanian scholar, Godfrey Mwakikagile stated that Nyerere’s united country, “is probably his most enduring legacy; yet the least appreciated among his most ardent critics” (2007, p. 17). For instance, during Ujamaa a major policy advanced was the use of one language, Swahili, instead of the numerous indigenous dialects and English (Miguel, 2004). The policy is still in place today and reveals a stark contrast from Kenya and the Lake Victoria neighbor, Uganda, with upwards of 50 dialects currently in use. As different languages typically pair with ethnic groups, the benefits of one unifying language impacts the country and its citizens by removing this barrier to the public sharing of experiences and information promoting local development. An often consequence of numerous active languages is a distinguishing of one powerful tribe/kingdom dominating the others (eg. Bugandans using Luganda in Uganda; see Libman, 2012).

Tanzania currently provides more transparency than most other developing countries. This would suggest a greater capacity within their budgetary systems at all levels of government. However, the available information certainly is not adequate to fully explore the adequacy of either revenue assignment or decentralization primarily due to a lack of clarity in local service delivery costs as well as more specifics on the methodology employed by the central government

to transfer funds. The information does suggest that local governments are able to maximize and control the use of fees while the central government bears the larger share of imposing the more problematic taxes. This suggests an efficient tax structure. Considering all available information, the framework for revenue assignment is well laid out, on both the expense and revenue side. However, the literature that has been reviewed would seem to indicate, that has been the case in both Uganda and Ghana, the level of decentralization is much less than the structure would suggest.

Table 6

National Tax Statistics

| TRA Mainland | | | | | | | | | | | | | | Millions TShs. | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|-------------|
| Tax Item | 1996/97 | 1997/98 | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 |
| PAY E | 38,357.8 | 47,722.2 | 54,861.8 | 73,290.5 | 92,744.1 | 116,567.3 | 139,696.4 | 183,236.7 | 224,094.7 | 288,286.2 | 406,611.6 | 512,177.1 | 682,271.4 | 743,353.3 | 928,488.9 |
| Corporation Tax | 54,689.7 | 64,727.7 | 64,787.3 | 54,501.6 | 46,634.2 | 57,096.9 | 78,390.1 | 109,072.1 | 152,744.1 | 203,330.7 | 267,220.9 | 374,640.1 | 414,731.8 | 418,268.2 | 537,561.6 |
| Individuals | 9,117.9 | 9,768.8 | 10,539.8 | 12,005.9 | 12,925.7 | 14,006.4 | 15,664.5 | 18,293.8 | 26,067.9 | 31,433.7 | 31,174.2 | 36,306.8 | 42,100.7 | 48,632.0 | 58,482.8 |
| Other Income Taxes | 23,442.3 | 27,217.3 | 29,760.3 | 71,787.1 | 64,096.4 | 68,540.5 | 78,695.0 | 94,904.4 | 97,969.2 | 114,789.4 | 146,463.5 | 182,625.1 | 230,735.2 | 287,721.3 | 319,495.9 |
| Domestic Excess duty | 61,927.3 | 78,783.1 | 57,872.0 | 66,959.9 | 68,998.5 | 72,837.1 | 85,263.1 | 92,868.7 | 110,335.5 | 135,062.9 | 175,965.0 | 220,616.0 | 296,729.5 | 303,826.5 | 353,735.6 |
| Domestic VAT | 67,053.2 | 61,757.5 | 114,453.0 | 176,968.2 | 140,035.2 | 165,908.0 | 201,558.9 | 287,324.2 | 287,324.2 | 334,263.6 | 427,252.7 | 550,080.5 | 692,561.1 | 727,797.4 | 798,377.8 |
| Other Domestic Taxes & Charge | 77,272.8 | 80,359.0 | 61,188.4 | 60,253.1 | 22,087.1 | 24,887.8 | 26,018.4 | 32,019.7 | 26,760.8 | 29,977.7 | 36,329.8 | 73,696.1 | 83,768.2 | 97,397.2 | 136,099.4 |
| Import duty | 77,910.5 | 81,654.3 | 87,360.1 | 87,679.3 | 96,346.1 | 89,867.2 | 107,597.0 | 132,220.9 | 106,561.4 | 177,795.6 | 245,477.9 | 304,477.1 | 373,948.5 | 383,329.5 | 489,010.5 |
| Excises duty on Import | 29,760.1 | 22,465.9 | 25,825.6 | 22,272.1 | 85,765.8 | 104,776.7 | 102,001.8 | 120,587.5 | 127,615.2 | 126,507.4 | 311,984.6 | 440,301.2 | 475,254.1 | 533,795.5 | 614,293.4 |
| VAT on Import | 54,809.4 | 76,444.8 | 104,978.9 | 109,311.8 | 182,142.7 | 208,674.2 | 250,284.2 | 306,671.9 | 437,667.3 | 502,437.3 | 463,753.2 | 550,066.0 | 641,378.0 | 759,396.5 | 905,610.8 |
| Other Import charges | 12,193.0 | 9,788.4 | 4,638.1 | 22,531.1 | 49,541.4 | 53,392.0 | 59,204.3 | 68,693.9 | 77,447.9 | 76,879.3 | 111,235.5 | 220,549.3 | 258,144.4 | 266,911.6 | 327,450.5 |
| TOTAL (GROSS) | 506,630.0 | 560,818.1 | 616,265.3 | 707,540.6 | 861,327.1 | 976,608.2 | 1,144,328.6 | 1,387,748.5 | 1,683,588.2 | 2,020,763.8 | 2,619,488.7 | 3,465,335.3 | 4,161,639.8 | 4,570,479.2 | 5,464,507.1 |
| Less Tax Refunds | - | - | - | 20,938.3 | 26,563.1 | 35,011.8 | 36,374.5 | 68,442.4 | 73,916.3 | 87,851.0 | 106,713.4 | 120,427.0 | 142,176.0 | 163,518.9 | 174,119.0 |
| TOTAL (NET) | 506,630.0 | 560,818.1 | 616,265.3 | 686,602.3 | 834,764.0 | 941,596.5 | 1,107,954.1 | 1,319,306.1 | 1,609,671.9 | 1,933,912.8 | 2,512,775.4 | 3,345,008.3 | 4,019,452.9 | 4,406,910.3 | 5,290,387.2 |
| Add Treasury Voucher & Non-T | - | - | - | - | - | - | - | - | 15,567.4 | 38,501.9 | 64,488.0 | 33,705.1 | 32,511.0 | 37,023.2 | 29,134.6 |
| GRAND TOTAL (Mainland) | 506,630.0 | 560,818.1 | 616,265.3 | 686,602.3 | 834,764.0 | 941,596.5 | 1,107,954.1 | 1,319,306.1 | 1,625,239.3 | 1,971,414.8 | 2,577,263.9 | 3,378,793.4 | 4,051,963.9 | 4,437,933.4 | 5,319,521.8 |
| Source: Tanzania Revenue Authority | | | | | | | | | | | | | | | |
| Itemized Tax Revenue as a Percentage of Total Tax Revenue (TRA Mainland) | | | | | | | | | | | | | | | |
| Tax Item | 1996/97 | 1997/98 | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 |
| PAY E | 7.6% | 8.5% | 8.9% | 10.4% | 10.8% | 11.9% | 12.2% | 13.2% | 13.9% | 14.3% | 15.6% | 14.8% | 15.9% | 16.3% | 17.0% |
| Corporation Tax | 10.8% | 11.5% | 10.5% | 7.7% | 5.4% | 5.8% | 6.8% | 7.9% | 9.1% | 10.1% | 10.2% | 10.8% | 10.0% | 9.2% | 9.8% |
| Individuals | 1.8% | 1.7% | 1.7% | 1.7% | 1.5% | 1.4% | 1.4% | 1.3% | 1.6% | 1.6% | 1.2% | 1.0% | 1.0% | 1.1% | 1.1% |
| Other Income Taxes | 4.6% | 4.9% | 4.8% | 10.1% | 7.4% | 7.0% | 6.5% | 6.8% | 5.8% | 5.7% | 5.6% | 5.3% | 5.5% | 6.3% | 5.8% |
| Domestic Excess duty | 12.2% | 14.0% | 9.4% | 9.5% | 8.0% | 7.5% | 7.5% | 6.7% | 6.6% | 6.7% | 6.7% | 6.4% | 6.0% | 6.6% | 6.5% |
| Domestic VAT | 13.2% | 11.0% | 18.6% | 17.9% | 16.3% | 17.0% | 17.8% | 16.5% | 17.1% | 16.5% | 16.1% | 15.8% | 16.0% | 15.9% | 14.6% |
| Other Domestic Taxes & Charge | 15.3% | 14.3% | 9.9% | 8.5% | 2.6% | 2.6% | 2.5% | 2.3% | 1.5% | 1.5% | 1.4% | 2.1% | 2.0% | 2.1% | 2.5% |
| Import duty | 15.4% | 14.6% | 14.2% | 12.4% | 11.2% | 9.2% | 9.3% | 9.5% | 6.3% | 8.5% | 9.4% | 8.5% | 9.0% | 8.4% | 8.9% |
| Excises duty on Import | 5.9% | 4.0% | 4.2% | 3.1% | 10.0% | 10.1% | 8.0% | 8.7% | 7.6% | 6.3% | 11.9% | 12.7% | 11.4% | 11.7% | 11.2% |
| VAT on Import | 10.8% | 13.6% | 17.0% | 15.4% | 21.1% | 21.4% | 21.2% | 22.1% | 26.0% | 24.9% | 17.7% | 15.0% | 15.4% | 16.6% | 16.6% |
| Other Import charges | 2.4% | 1.7% | 0.8% | 3.2% | 5.8% | 5.5% | 5.2% | 5.0% | 4.6% | 3.8% | 4.2% | 6.4% | 6.2% | 5.8% | 6.0% |
| TOTAL (GROSS) | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Actual Revenue Collections (Quarterly) for 2004/05 By Tax Item

| Income Tax Department | | | | | | | | | | | | | Million Tsh | | | |
|---------------------------------------|-------------|----------|-----------|----------|-------------|----------|----------|----------|-------------|----------|----------|----------|-------------|----------|----------|----------|
| TAX ITEM | 1st Quarter | | | | 2nd Quarter | | | | 3rd Quarter | | | | 4th Quarter | | | |
| | July | August | September | Total | October | November | December | Total | January | February | March | Total | April | May | June | Total |
| Limited Companies | 2,003.2 | 1,964.2 | 6,011.2 | 10,068.6 | 1,920.1 | 1,900.1 | 6,768.4 | 10,588.6 | 2,427.8 | 1,938.6 | 7,078.6 | 11,445.0 | 1,630.4 | 2,004.2 | 7,488.4 | 11,123.0 |
| Parastatals | 603.2 | 132.1 | 639.9 | 1,375.2 | 148.6 | 180.0 | 214.4 | 543.0 | 72.8 | 20.6 | 2.1 | 95.5 | 0.3 | 101.1 | 12.2 | 223.6 |
| Individuals | 1,456.1 | 1,414.9 | 2,631.6 | 5,702.6 | 1,355.4 | 1,594.1 | 3,813.7 | 6,753.2 | 1,424.0 | 1,261.8 | 3,837.8 | 6,523.6 | 1,949.2 | 1,268.2 | 3,861.1 | 7,078.5 |
| Windfall Tax | 0.05 | - | - | 0.05 | 0.3 | - | 1.7 | 2.0 | - | - | - | - | - | - | - | - |
| Windfalling Tax (RMD) | 1,464.8 | 1,039.2 | 891.8 | 3,395.8 | 870.4 | 1,081.1 | 1,125.3 | 3,076.8 | 1,336.0 | 613.6 | 766.1 | 2,714.7 | 918.7 | 969.4 | 1,371.9 | 3,260.0 |
| Capital Gains Tax | 344.8 | 70.4 | 289.8 | 705.0 | 73.8 | 57.5 | 120.4 | 251.7 | 78.5 | 65.8 | 101.9 | 246.2 | 98.6 | 73.5 | 102.1 | 202.2 |
| Shipping Tax | 19.9 | 116.7 | 186.5 | 323.1 | 129.0 | 238.8 | 270.6 | 638.4 | 252.9 | 140.8 | 101.9 | 393.7 | 100.0 | 134.5 | 112.5 | 347.0 |
| Transport | 40.4 | 69.3 | 9.9 | 119.6 | 83.6 | 13.8 | 11.8 | 109.2 | 83.9 | 9.3 | 38.5 | 131.7 | 22.0 | 9.9 | 30.2 | 62.1 |
| Miscellaneous Collections | 10.2 | 18.4 | 17.3 | 45.9 | 21.6 | 52.5 | 14.3 | 88.4 | 37.4 | 288.4 | 179.8 | 485.6 | 53.9 | 57.7 | 203.4 | 303.4 |
| Withholding Tax (Goods and Services) | 171.9 | 249.3 | 454.3 | 875.5 | 966.3 | 85.1 | 389.6 | 1,441.0 | 182.6 | 231.9 | 326.6 | 741.1 | 287.9 | 132.9 | 136.5 | 557.3 |
| Withholding Tax Insurance Commission | 1.6 | 2.7 | 1.5 | 5.8 | 2.5 | 2.7 | 32.4 | 37.6 | 0.1 | 0.3 | 4.6 | 5.0 | 0.9 | 0.1 | 28.5 | 29.5 |
| Withholding Tax Bank Interest | 27.2 | 53.6 | 22.7 | 103.5 | 9.3 | 12.0 | 32.5 | 53.8 | 72.9 | 56.0 | 44.6 | 173.5 | 12.8 | 20.6 | 13.2 | 46.6 |
| Treasury Bills | - | - | - | - | - | - | - | - | 0.1 | - | - | - | - | - | - | - |
| Rental Tax | 376.2 | 454.7 | 653.5 | 1,484.4 | 562.8 | 391.1 | 520.6 | 1,474.5 | 479.9 | 382.3 | 568.7 | 1,430.9 | 396.4 | 391.8 | 517.0 | 1,305.2 |
| Gaming Tax | 43.3 | 29.7 | 29.2 | 102.2 | 30.2 | 36.8 | 30.7 | 97.7 | 69.1 | 61.8 | 52.8 | 183.7 | 60.9 | 50.5 | 30.2 | 130.7 |
| Sub-Total | 6,652.8 | 5,615.2 | 12,039.2 | 24,307.2 | 6,173.9 | 5,645.6 | 13,346.4 | 25,165.9 | 6,517.0 | 5,051.2 | 13,002.1 | 24,570.0 | 5,532.0 | 5,293.5 | 14,017.2 | 24,752.7 |
| PAYE | 7,379.6 | 9,080.8 | 9,244.2 | 25,704.6 | 9,142.8 | 9,597.5 | 10,851.4 | 29,591.7 | 9,362.9 | 9,710.2 | 10,648.2 | 29,721.3 | 10,169.4 | 10,414.7 | 12,152.3 | 32,736.4 |
| Skills and Development Levy | 1,560.9 | 1,674.6 | 2,047.1 | 5,482.6 | 1,671.4 | 1,977.2 | 2,379.0 | 6,021.6 | 1,887.8 | 1,904.9 | 2,189.8 | 5,952.5 | 2,123.0 | 2,256.5 | 2,286.2 | 6,677.7 |
| Sub-Total | 8,940.5 | 10,955.4 | 11,291.3 | 31,187.2 | 11,014.2 | 11,574.7 | 13,230.4 | 35,819.3 | 11,250.7 | 11,615.1 | 12,809.0 | 35,673.8 | 12,292.4 | 12,673.2 | 14,445.8 | 39,414.1 |
| TOTAL (GROSS) | 15,593.3 | 16,570.6 | 23,330.5 | 55,494.4 | 17,188.1 | 17,220.3 | 26,576.8 | 60,985.2 | 17,767.7 | 16,666.3 | 25,810.1 | 60,244.1 | 17,824.4 | 17,676.7 | 28,465.7 | 64,166.8 |
| Less: Transfers to refunds A/C & VETA | 1,065.9 | 586.1 | 1,030.7 | 2,682.7 | 1,510.5 | 1,475.3 | 1,030.7 | 4,016.5 | 1,030.7 | 1,030.7 | 1,030.7 | 3,092.1 | 1,030.7 | 1,030.7 | 1,030.7 | 3,092.1 |
| TOTAL (NET) | 14,527.4 | 15,984.5 | 22,299.8 | 52,811.7 | 15,677.6 | 15,745.0 | 25,546.1 | 56,968.7 | 16,737.0 | 15,635.6 | 24,779.4 | 57,152.0 | 16,793.7 | 16,646.0 | 27,435.0 | 61,074.7 |
| Source: Tanzania Revenue Authority | | | | | | | | | | | | | | | | |

| VAT Department | | | | | | | | | | Million Tsh | | | | | | | | | |
|-------------------------------|----------|-------------|----------|-----------|-------------|----------|----------|-------------|---------|-------------|-------------|----------|-----------|----------|----------|-----------|--|--|--|
| | TAX ITEM | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | | | | | | |
| | | July | August | September | October | November | December | Total | January | February | March | Total | April | May | June | Total | | | |
| Excise Duty- Local | | | | | | | | | | | | | | | | | | | |
| Beer | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | |
| Cigarettes | - | 0.1 | - | 0.1 | - | - | - | - | - | - | 76.2 | 76.2 | 7.8 | - | 84.7 | 92.5 | | | |
| Soft Drinks | 278.6 | 309.1 | 372.3 | 960.0 | 370.5 | 380.2 | 243.3 | 994.0 | 362.6 | 375.7 | 282.5 | 1,020.8 | 338.6 | 170.6 | 290.2 | 799.4 | | | |
| Spirits/Konyagi | 28.6 | 23.1 | 27.8 | 79.5 | 0.4 | 56.0 | 35.1 | 91.5 | 36.8 | 42.6 | 26.7 | 106.0 | 33.3 | 43.2 | 55.8 | 132.3 | | | |
| Mobile Phone | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | |
| S/Plastic bags | 2.8 | 0.2 | 23.9 | 26.9 | 12.9 | 3.8 | 0.2 | 16.9 | 0.3 | 0.1 | 2.3 | 2.8 | 0.6 | 2.1 | 1.3 | 4.0 | | | |
| Wine | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | |
| Other products | - | 4.9 | 102.9 | 107.8 | 70.3 | 16.7 | 8.5 | 95.5 | 10.4 | 21.2 | 10.7 | 42.4 | 18.1 | 0.1 | 2.9 | 21.1 | | | |
| Sub-Total | 310.0 | 337.4 | 526.9 | 1,174.3 | 454.1 | 456.7 | 287.1 | 1,197.9 | 410.1 | 439.7 | 398.4 | 1,248.2 | 398.37 | 216.00 | 434.90 | 1,049.27 | | | |
| VAT - Local | | | | | | | | | | | | | | | | | | | |
| Petroleum | 213.7 | 255.8 | 560.1 | 1,029.6 | 181.6 | 229.1 | 202.4 | 613.1 | 214.2 | 516.3 | 690.4 | 1,420.9 | 190.70 | 157.80 | 182.20 | 530.70 | | | |
| Beer | - | 1.9 | 1.7 | 3.6 | 1.1 | 2.6 | 1.7 | 5.4 | 1.0 | 1.0 | 0.4 | 1.4 | 0.55 | 0.40 | 0.40 | 1.45 | | | |
| Cigarettes | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 6.0 | 0.1 | 6.2 | - | 0.10 | - | 0.10 | | | |
| Textiles | 48.9 | 54.9 | 59.2 | 163.0 | 61.1 | 56.6 | 49.6 | 166.3 | 51.3 | 19.7 | 61.4 | 132.4 | 64.30 | 35.20 | 52.30 | 151.80 | | | |
| Soft Drinks | 130.7 | 292.1 | 349.6 | 772.4 | 383.9 | 355.1 | 233.1 | 972.1 | 272.5 | 374.7 | 283.7 | 930.9 | 203.50 | 141.30 | 208.90 | 553.70 | | | |
| S soap & Detergents | 2.3 | 5.4 | 19.3 | 27.0 | 4.2 | 13.9 | 58.9 | 77.0 | 6.6 | 18.6 | 0.1 | 25.3 | 25.80 | - | 19.90 | 45.70 | | | |
| Spirits/Konyagi | 1.4 | 2.3 | - | 3.7 | 1.2 | 0.1 | 27.9 | 29.2 | 0.4 | 0.6 | 54.9 | 55.9 | - | - | 34.90 | 35.45 | | | |
| Sugar | 1,005.3 | 1,189.3 | 1,009.4 | 3,204.0 | 1,089.0 | 1,036.8 | 938.2 | 3,064.0 | 1,034.7 | 760.5 | 756.4 | 2,551.6 | 1,099.20 | 505.50 | 437.90 | 2,042.60 | | | |
| Others | 6,777.9 | 8,462.5 | 8,270.2 | 23,510.6 | 8,226.7 | 9,601.0 | 8,612.7 | 26,440.4 | 7,949.6 | 8,778.5 | 8,572.3 | 25,300.4 | 8,588.50 | 8,655.70 | 9,068.00 | 26,312.20 | | | |
| Sub-Total | 8,180.3 | 10,264.3 | 10,269.6 | 28,714.1 | 9,948.6 | 11,297.3 | 10,124.6 | 31,370.7 | 9,529.4 | 10,475.9 | 10,419.8 | 30,425.5 | 10,172.65 | 9,530.90 | 9,970.15 | 29,673.70 | | | |
| Other Taxes Business-Licences | 0.1 | 0.6 | 0.5 | 1.2 | - | 0.9 | - | 0.9 | 0.1 | 1.2 | - | 1.3 | 1.1 | 1.1 | 0.8 | 3.0 | | | |
| Departure Charges | 709.1 | 996.7 | 951.5 | 2,657.3 | 838.0 | 831.0 | 742.0 | 2,411.0 | 803.1 | 883.3 | 733.9 | 2,420.3 | 740.2 | 520.7 | 718.3 | 1,979.2 | | | |
| Motor Vehicle Taxes | 875.0 | 737.30 | 718.90 | 2,331.9 | 829.50 | 665.1 | 718.80 | 2,213.4 | 630.80 | 927.10 | 1,034.80 | 2,582.7 | 949.3 | 1,068.5 | 1,357.2 | 3,375.0 | | | |
| Stamp Duty | 942.3 | 320.4 | 444.8 | 1,707.5 | 358.4 | 310.2 | 483.1 | 1,151.7 | 302.9 | 194.3 | 233.7 | 730.9 | 199.8 | 220.6 | 262.5 | 662.9 | | | |

Table 9,
10, & 11

TANZANIA REVENUE AUTHORITY
Actual Revenue Collections (Quarterly) for 2004/05 By Tax Item

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Sub-Total | 2,527.2 | 2,055.0 | 2,115.7 | 6,697.9 | 2,025.9 | 1,807.2 | 1,943.9 | 5,777.0 | 1,736.9 | 2,005.9 | 2,002.4 | 5,745.2 | 1,890.40 | 1,810.90 | 2,338.80 | 6,040.10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

Regional Tax Statistics

| REGION (TZ Mainland) | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | Millions TShs. |
|------------------------------------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|
| Large Taxpayer | | | | 204,397.5 | 312,275.3 | 370,636.9 | 543,431.4 | 764,396.2 | 1,097,887.8 | 1,396,036.3 | 1,685,347.6 | 1,930,426.6 | 2,131,143.1 | |
| Small Taxpayer (Previously DSM) | 55,689.5 | 552,413.3 | 655,937.9 | 555,457.3 | 594,830.1 | 748,359.1 | 839,530.6 | 129,489.0 | 154,036.0 | 216,631.5 | 275,214.9 | 278,775.9 | 355,552.0 | |
| Kenya | | | | | | | | 29,082.1 | 43,073.5 | 74,452.2 | 118,811.7 | 136,746.2 | 182,042.8 | |
| Tanzania | | | | | | | | 18,117.9 | 27,631.6 | 41,354.9 | 66,654.5 | 1,071,961.4 | 1,999,442.6 | |
| DSM Service Centre | | | | | | | | 735,291.3 | 891,161.4 | 1,224,603.1 | 1,446,810.5 | 1,617,961.4 | 1,999,442.6 | |
| NIA | | | | | | | | 40,411.3 | 60,611.3 | 90,811.3 | 136,311.3 | 171,711.3 | 217,111.3 | |
| Coast | 18,494.7 | 40,121.6 | 43,810.8 | 38,428.2 | 40,968.9 | 42,989.6 | 51,541.2 | 65,285.0 | 80,037.5 | 10,724.3 | 12,074.3 | 15,668.0 | 17,711.5 | |
| Geography | 18,494.7 | 15,154.8 | 1,100.3 | 1,515.8 | 1,665.5 | 2,026.6 | 4,988.1 | 4,988.1 | 2,578.8 | 3,593.3 | 4,807.1 | 6,361.2 | 8,328.2 | |
| Dodoma | 2,224.5 | 2,392.7 | 3,035.6 | 3,007.4 | 3,181.2 | 3,808.5 | 4,947.5 | 6,302.1 | 7,389.6 | 2,349.9 | 2,693.9 | 3,524.3 | 4,807.1 | |
| Income | 9,406.6 | 3,969.5 | 4,410.8 | 4,238.1 | 5,235.3 | 5,724.7 | 6,302.1 | 7,400.4 | 8,037.5 | 10,724.3 | 12,074.3 | 15,668.0 | 17,711.5 | |
| Karanga | 2,312.4 | 2,544.8 | 3,866.6 | 4,238.1 | 4,941.4 | 3,881.8 | 1,978.7 | 7,389.6 | 2,349.9 | 2,693.9 | 3,524.3 | 4,807.1 | 6,361.2 | |
| Kigoma | 3,819.2 | 2,021.2 | 4,055.2 | 4,673.7 | 5,120.4 | 3,043.7 | 1,978.7 | 7,389.6 | 2,349.9 | 2,693.9 | 3,524.3 | 4,807.1 | 6,361.2 | |
| Kilimanjaro | 13,500.7 | 22,090.5 | 29,454.1 | 27,305.7 | 30,625.2 | 28,355.9 | 38,873.9 | 49,965.6 | 62,092.2 | 45,259.4 | 50,434.5 | 56,882.0 | 72,457.3 | |
| Lindi | 5,043.1 | 698.2 | 735.7 | 709.8 | 620.8 | 671.9 | 609.2 | 712.8 | 942.0 | 1,339.9 | 1,771.1 | 2,097.4 | 2,675.2 | |
| Mara | 7,554.8 | 6,254.5 | 7,857.2 | 9,155.1 | 15,560.3 | 21,425.1 | 31,024.7 | 33,308.9 | 41,558.1 | 48,344.9 | 62,258.9 | 82,324.4 | 55,679.2 | |
| Mbarara | 18,361.0 | 8,890.0 | 9,050.9 | 11,227.0 | 16,862.8 | 24,228.3 | 24,228.3 | 31,146.3 | 33,308.9 | 39,977.9 | 44,181.3 | 48,344.9 | 46,975.6 | |
| Mogoro | 5,621.2 | 9,760.2 | 14,756.8 | 14,515.1 | 16,862.8 | 22,024.5 | 23,239.5 | 30,181.5 | 32,886.9 | 39,977.9 | 44,181.3 | 48,344.9 | 46,975.6 | |
| Mwanza | 2,979.3 | 4,131.6 | 9,722.3 | 8,410.8 | 9,065.1 | 3,197.2 | 2,659.4 | 3,919.4 | 7,103.7 | 12,865.1 | 20,166.1 | 23,724.1 | 28,170.9 | |
| Ruvuma | 10,074.5 | 24,371.5 | 37,326.0 | 38,903.2 | 39,771.0 | 32,206.4 | 37,118.0 | 39,382.6 | 43,652.1 | 67,801.2 | 61,453.6 | 18,595.3 | 52,321.5 | |
| Ruvuma | 1,425.3 | 1,380.2 | 1,207.7 | 1,087.5 | 1,251.2 | 1,568.5 | 1,495.7 | 1,673.4 | 1,945.3 | 2,550.1 | 3,021.5 | 3,570.7 | 4,340.7 | |
| Shinyanga | 7,352.8 | 4,267.9 | 8,039.7 | 15,917.3 | 14,075.2 | 11,493.0 | 18,626.6 | 4,868.4 | 5,665.8 | 6,679.1 | 7,769.0 | 15,382.7 | 11,285.7 | |
| Singida | 535.8 | 520.9 | 586.9 | 685.5 | 784.3 | 879.8 | 813.5 | 937.8 | 1,421.6 | 1,437.0 | 1,411.6 | 1,849.5 | 2,211.5 | |
| Tabora | 2,703.4 | 2,203.6 | 5,220.6 | 5,667.0 | 6,732.5 | 6,033.6 | 6,030.2 | 6,030.2 | 5,616.2 | 4,688.1 | 5,955.6 | 7,009.9 | 8,185.0 | |
| Tanga | 22,514.7 | 17,151.9 | 20,628.0 | 27,876.3 | 41,109.2 | 38,003.1 | 41,109.2 | 52,601.3 | 82,054.6 | 95,357.1 | 74,444.4 | 67,226.8 | 66,356.6 | |
| Rukwa | 207,001.7 | 756.3 | 908.0 | 998.2 | 1,021.3 | 1,298.4 | 1,276.6 | 1,404.1 | 1,505.2 | 1,985.5 | 2,684.5 | 3,206.0 | 3,840.3 | |
| Mbarara | | | | | | | | 937.2 | 1,335.9 | 2,128.1 | 2,593.9 | 2,943.0 | 3,890.9 | |
| Total (GROSS) | 616,265.3 | 707,540.6 | 861,327.1 | 976,608.2 | 1,144,326.6 | 1,367,899.5 | 1,683,703.4 | 2,020,763.9 | 2,619,488.6 | 3,465,835.3 | 4,161,630.9 | 4,570,429.2 | 5,464,507.1 | |
| Less Refunds (VAT & Others) | - | 20,538.3 | 28,593.1 | 35,011.8 | 36,374.5 | 66,442.4 | 73,916.3 | 87,851.0 | 106,715.3 | 120,747.0 | 142,178.0 | 163,518.9 | 174,119.9 | |
| Net collections | 616,265.3 | 686,602.3 | 834,744.0 | 941,596.5 | 1,107,954.1 | 1,299,457.1 | 1,609,787.1 | 1,932,912.9 | 2,512,773.3 | 3,345,088.3 | 4,019,452.9 | 4,406,910.3 | 5,290,387.1 | |
| Add Treasury Vouchers & Other N | - | - | - | - | - | 18,889.1 | 15,452.2 | 38,501.9 | 64,488.7 | 33,705.2 | 32,511.0 | 31,023.2 | 28,134.6 | |
| Total TRA Mainland | 616,265.3 | 686,602.3 | 834,744.0 | 941,596.5 | 1,107,954.1 | 1,318,306.1 | 1,625,239.3 | 1,971,414.8 | 2,577,263.9 | 3,378,793.4 | 4,051,963.9 | 4,437,933.4 | 5,318,521.7 | |
| REGION (Zanzibar) | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | |
| TRA Zanzibar | 26,230.9 | 39,098.8 | 23,400.0 | 21,211.6 | 22,032.5 | 21,616.5 | 20,734.9 | 22,374.6 | 30,494.9 | 39,858.0 | 53,945.8 | 56,872.1 | 76,355.3 | |
| Source: Tanzania Revenue Authority | | | | | | | | | | | | | | |

Table 12 & 13

Conclusion

The above three cases expressed diverging systems of governments with citizens. Uganda and Tanzania both hold a highly centralized system under the title of “decentralized reforms” and under the auspices of the international actors; however, the means show a sharp divergence in strategies. Military might and paid loyalty dominate Uganda’s three decades of NRM reforms, while Tanzania has consistently exercised a dogma of strength in national unity and the importance of government being a product of the citizenry. This is more than a normative differentiation. The goal of any democratic reform, and in these instances decentralization, is to bring representation to the “people,” and is often accompanied by stability and legitimacy in local government and liberalizing markets. There is an obvious connection in the histories of these cases with current economic policy and social policy when it comes to engaging with citizens.

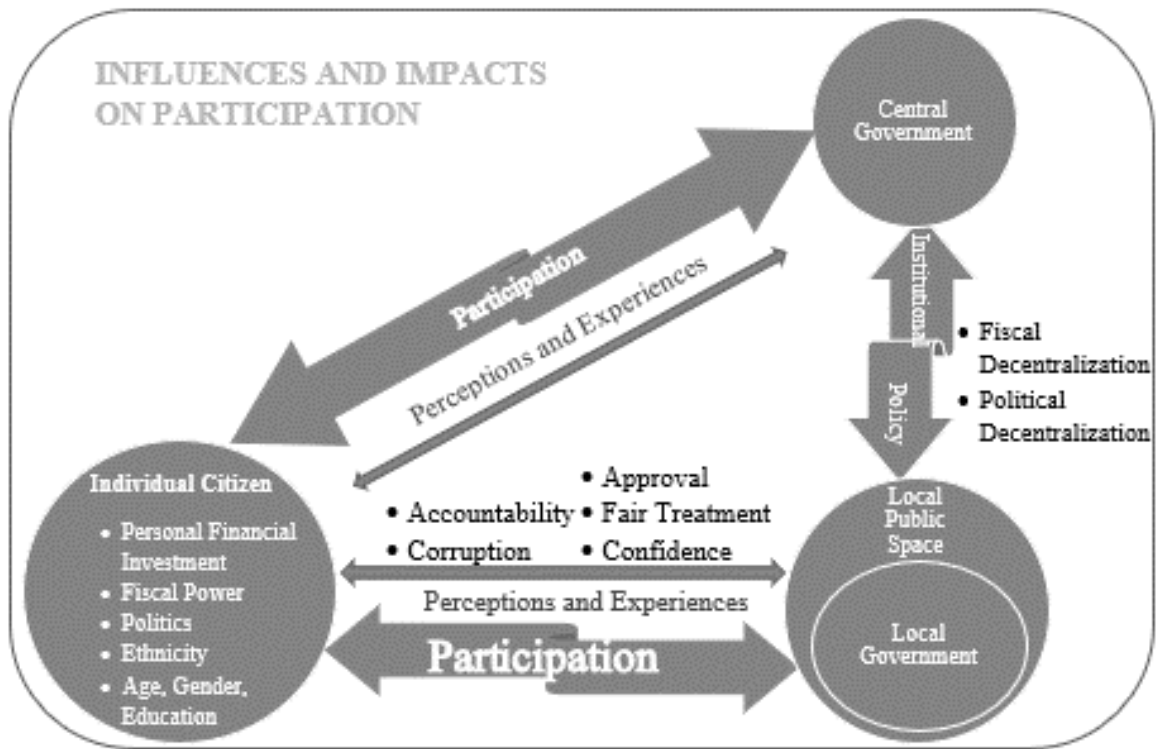
Chapter 2: Theoretical Motivations, Hypotheses, and Expectations

This study draws on literature from various fields including comparative politics, development studies, civil society, and public administration. For instance, the foundational importance of participation in decision-making is based in the psychology literature with Locke and Latham (2002) review of literature findings that participation increases buy-in, education, and stability toward goals. This current research moves from the norm of development studies in Africa, which primarily focuses on central structure and policy creation, where scholars such as Manyak and Katano (2010), Green (2010), and Okidi and Goluba (2008) have looked at motivations for development strategies and the national failures that have resulted. Instead, this study predominantly assesses participation, the environmental factors around it at the ground level, and the strategy ingrained in mainstream development for thirty years, decentralization.

This study attempts to accept both traditional and more recent arguments regarding influences on citizen participation as potentially significant variables. Arnstein's (1969) seminal work on promoting and quantifying participation created a linear model based around the role of power and its movement from central institutions to the terminal of the people. Models of participation since have kept at their center the role of institutions and power as motivators for participation (Mostert, 2003; Choguill, 1996). However, in recent years, scholars have begun to acknowledge the obvious once addressed role citizens' attitudes have on their own decisions to participate in public decision-making. As recently as Swapan (2016), found in the developing nation of Bangladesh that individual attitudes and traits have a direct impact on the citizen's decision to participate and how to participate. The study expands upon the attitudes and individual traits found in Swapan's research to also include those which may be more relevant in sub-Saharan Africa (e.g. corruption).

This study does not presume to hold one model explaining participation over another in matters of statistical significance and instead attempts to dovetail them to create an inclusive and comprehensive model so that all potential influences can be assessed. As such, this study does its best to address both institutional and the more abstract variables of attitudes and perceptions of citizens when attempting to understand why an individual may or may not participate and to what degree. While this study looks at formal and informal means of participation like Swapan (2016) does, the total amount of participation in the public space and the potential reasoning behind the participation is also important. Because of this, the research utilizes a categorization method by Campbell and Marshall (2011), which stratifies based on motivation and the number of people one must participate/interact within the action when addressing the correlations in the factor analysis. The institutions looked at in the study primarily focus around the policies of decentralization in the nations. The attitudes addressed in the study focus on perceptions of government officials and the relationships the citizens may have with them. For guidance on those variables impacting participation, this study will rely more dominantly on research in developing nations by Zhou and Zhang (2009) for perceptions and experiences and Moehler (2007) for individual characteristics. The model found below is meant to surmise the actors and variables which should impact citizens' decisions to participate.

Figure 1: The Study's Model



Participation

Most significant research in this area is from western, developed countries has assessed the importance of participation in government. Beginning with the simplest examples, Barnard (1938) explained that the individual seeks others in order to accomplish a feat impossible on one's own. If the study accepts a broad definition of "organization" to include local government units as potential formal systems of cooperation, these units do allow for continued interactions between individuals. The formal organization also contains informal systems, which are useful to the maintenance of the formal systems, to have the opportunity to address issues in the area (Barnard, 1938). This communication means to strengthen the bonds between the principal and the agent in the theory of the same name. Previous research and theories presented later in the literature review will demonstrate that government institutions as formal organizations require the support of both other formal systems, such as registered civil society organizations (CSOs), and the informal institutions, formed through bonds of friendship, ethnic identity, politics, and even wealth, in order to remain legitimate and wield the necessary authority over public decisions.

Local participation is important in the larger context of national government effectiveness because citizens experience and understand on-the-ground problems. Taking the time and resources to allow local participation by the government should result in a more satisfactory and efficient outcome (Friedrich, 1940; Finer, 1941; Cooke and Kothari, 2001). However, achievement of long-term goals, in this case, economic, political, social development, require stability and support throughout the process. These come from a free exchange of opinions and concerns between and among leaders and followers.

Participation's motivation and importance

From an organization theory perspective, Graen and Schiemann in 1978 examined the individual relationships between leaders and followers in what they called the “Leader-Member Agreement” and found that, “Those members establishing high- quality exchanges with their leaders (in- group exchanges) can be expected to show higher agreement with their leaders than those who develop low-quality exchanges” (211). In an organizational structure, whether it is found in an international business or a local level government, leaders will have better relationships and find a more agreeable environment for accomplishing goals when those under them and responsible for completing tasks are able to freely and frequently communicate with the leaders.

The real impact of participation in the goal-setting process and subsequent decision-making extends past the goal and instead continues to benefit those who participated. Having the engagement of members, whether it be in a for-profit setting or, in this study, the community, may help in the motivation to achieve the goal, but it also builds the cognitive ability of those participating (Locke et al., 1997; cited in Locke and Latham, 2002). Through the exercise, individuals gain a better understanding of the goal, the problems, and the strategies the leaders either decided on independently or, in a more optimal situation, with members. This education about achieving goals through community participation builds individual self-efficacy, which encourages goal completion and lays the groundwork for future input in goal setting (Bandura, 1997; White & Locke, 2000; cited in Locke and Latham, 2002). Education, specifically that which deals with current goals, allows the individuals to not only understand and help push along the goals but also allows those members to enhance the broader process and fix problems they

see from their own expertise. These benefits from the members would not have been found had leaders not taken the time to communicate and encourage participation.

Though participation is a core component to the democratic process of decision-making and goal completion, the study should not assume the allowance of or motivation for participation. How members of an organization or community perceive their leaders is important to the promotion of participation. Follett (1926) and Vroom (2000) discussed the importance for leadership to understand the environment and situations in which leaders are attempting to advance objectives. For leaders, it is not just a question of whether there is a need for participation, but rather to what extent participation should be sought (Vroom, 2000). For leaders to gain this participation and have the member input and commitment needed for the goals to be accomplished, leaders in democracies need to understand the situations of members, their attitudes toward the problem/potential solution, and feelings toward the leaders themselves (Follett, 1926). Leaders have a responsibility to their members just as they have to the goals and promoting active communication from members is foundational and self-promoting method of understanding the members' circumstances and the goals.

In addition to the need for a better understanding of the circumstances of community members in order to effectively set and execute goals and objectives, the leaders themselves also need to continue to communicate with members. Unless goal setting, and goal completion are instantaneous, leaders need to receive constant feedback from members in order to adequately gauge the progress made to achieving those tasks (Locke and Latham, 2002). As underperforming, will find them failing to hit their goals and over-performing may mean they could have used some of those resources on another task, participation from members in the form of feedback is important.

No matter the impact of a specific policy on a population, which could soundly eradicate a problem or increase the prosperity of the group, those in charge of setting the policies should gather the support of group leaders affected by the policies in developing democracies. Historically, in many of the countries in this study, there has been a pattern of policies being pushed onto the populations and those populations rebuking the changes overtime (e.g. Structural Adjustment Programs). Execution of policy without public input only works for a short time and if those goals are not accomplished quickly, policy setters will begin to feel pushback from the populations (Barnard, 1938). If organizations are systems of exchanges, as Barnard suggests, then those civil constructs containing populations need to have active communication with leaders or else the encompassing organization will stagnate and falter. The description of organizations is confirmed by later authors, such as Mazmanian and Sabatier (1989), who cited the need for leaders to have the proper political and managerial skills, but also must have the political support of the voter-base. Having political support from affected populations in a democracy helps ensure that the policy will stay a priority into the future. The policy agenda for an organization has multiple goals and they may change from year to year, depending on what was promoted as important. If leaders do not have stakeholders' commitment for a policy, the goal can slide in importance when it comes to expenditures or fall off the agenda completely.

Participation: Theoretical Foundation

Regardless of the actor in question (e.g., for-profit, nonprofit, government bureaucracy, the individual citizen), participation from members leads to buy-in that builds legitimacy for the final decisions of the leadership. Despite the chain of command of the most hierarchical structure, authority still comes from the bottom and without it you encounter resistance, a questioning of one's power, failure to implement as expected, or even walkouts and revolutions.

In his 1938 classic, *The Function of the Executive*, Barnard distinguished between the formal organization and those informal organizations found within the formal. The formal organization is what the public sees and controlled by the internal power structure of the organization. The informal groups, those made up of members coalescing around interests and habits, are what form the organization and push it forward toward goals and bring stability. The disadvantage that most leaders of the formal organizations experience is a lack of awareness of these informal groups, making it more difficult to achieve the goals and tasks of the organization. Democratic leadership needs to understand and communicate with these informal groups to obtain their support and move the organization in the direction believed needed to accomplish goals.

Berger and Luckmann (1966) focus on society and institutional constructs as both an objective and a subjective reality. The “objective” details the product of human interaction with others and the environment as, “it is possible to say that man has a nature, it is more significant to say that man constructs his own nature, or more simply, that man produces himself” (49). The interactions which are habituated and typified become institutions (54). These institutions take time to solidify and build legitimacy. As the nations in this study are still in their infancy and fixes can still be made if done quickly enough. Berger and Luckmann use the example of a person A and a person B finding themselves in an isolated situation forced to interact. As time passes, they come to understand the expectations for the other person and him/herself. These practices develop an institution. Similar to the example, large institutions develop roles for actors consisting of specified actions and goals (74). The specialization of roles and the knowledge required leads to segmentation and what the authors call “subuniverses” (85). Once institutionalized, the next obstacle for the construction is legitimation. Can/should the habits be transmitted to other actors? If A and B have a child, can their institutions be extended to the third

person? Though there are levels of legitimization, the symbolic universe represents the “ultimate fulfillment for institutions” or rather “social products with a history” (96-97). The universe is justification for the institution’s existence by integrating the past with norms and truths everyone accepts to conduct their lives and direct their goals. It is only through these interactions in forming institutions, which would be considered participation in the public space that stability, legitimacy, and development can be bolstered. As such, participation in the public space has value.

Framework for participation

As stated, the form or ends of participation in this study is the exertion or attempt to express influence over the public space. The outputs of which are policy. Participation’s importance in democratic policy creation and stability is presented in several theoretical frameworks. A good explanation of participation in the policy agenda is found in John Kingdon’s 1984’s reinvention of March, Cohen, and Olsen’s Garbage Can theory, which he calls the Multiple Streams Model. In the construct, the author describes three separate and independent streams of problems, policy, and politics, which, when they overlap, allow for a new policy to make it onto the agenda. When there is such a “policy window” - a critical event/crisis when the three converge - a framed problem matches with a defined policy solution if it has support from those in the political stream, the stakeholders and interest groups. This is where participation and continued participation is most relevant, as a constant monitoring and evaluation of the policy is necessary. The Garbage Can theory considers this “fluid participation” and explain it as a space where, ”Participants vary in the amount of time and effort they devote to different domains; involvement varies from one time to another. As a result, the boundaries of the organization are uncertain and changing; the audiences and decision makers for any

particular kind of choice change capriciously” (1). Support through participation is not considered a guarantee for the best policy to the most important problem. Leaders have a short window to make sure they appeal to the right stakeholders in the right way in order to gain enough support to have their policy on the organization’s agenda. This means that for the representative leaders to be effective in their policy-setting strategy, they must have an adequate, practical understanding of the groups, informal organizations, and stakeholders that make up the leader’s constituency and this comes from talking and interacting with the citizenry through them participating.

Citizens can learn about the government through active engagement and demanding better education. Referencing Locke and Lantham’s (2002) evaluation of psychological research, exposure through discussion of a problem helps develop one’s education on the problems and skills to help on future issues. The struggling environment in which local African administrations find themselves, with corruption, inexperience, and incapacity, is not at a point to adopt this idea of responsibility and independence from the populace, discussed with the Friedrich/Finer debate, and as such, civil society is important for an effective democratic government, as made in the argument for decentralization. Emphasizing the need for an engaged citizenry in order for stable bureaucratic and political structures to be put in place, King et al. (1998:318) states, “a growing recognition of the part of administrators that decision-making without public participation is ineffective” (quoted in Zafarullah, 2012). Dahl’s assessment would result in stunted governments in terms of democratic growth and effective/efficient policy.

Charles Lindblom (1965) highlights the abilities populations can exercise toward decision making in an environment without a leader or group of leaders’ direction (3-6). The author presents an extensive comparison of decision making in both a central coordinating system and

what he terms, partisan mutual adjustment. The first is characterized by a single decision maker or idea coordinating views, knowledge, and solutions (rather hierarchical structure) in order to solve problems (25). The latter is characterized by a wide range of self-interested actors with their own viewpoints and values on relevant social issues often found in a democracy. Through a comparative analysis Lindblom means to distinguish partisan mutual adjustment as the more optimal in problem solving/alleviation.

In terms of the vantage point for leaders to best serve those under them, an argument can be made that a position closest to members is better to acknowledge and act on members' communication and participation. As you will see below with the decentralization literature, there are several benefits of having leaders who oversee decision making having a position closest to the people as possible; however, here we will just discuss the additional ease of participation and feedback by the members. In his defense of the work by government officials at the local level, Lipsky (1980) found these "street-level bureaucrats" are the most publicly visible, and most sensitive to impacts by their actions on the populations. Local leaders, especially in a large national organization or government bureaucracy, are the first line of attack for goals and contact for members when they have a grievance with the government's execution of public services. While participation in decision-making matters in accomplishing these plans, the location of decision making for a problem can impact the amount of participation by members, which, as already stated, is necessary in a democratic system. As a structural or institutional factor this involves policy decisions by the central power.

When Participation is Successful...

In practice, community participation, with some level of ideal conditions, has been met with success and stability for government decision making and policy. Discussing Burby's

(2003) review of using participation in planning processes in cases in two US states, Mullins (2004) explains, “Broad involvement contributes to the establishment of consensus, limits the effectiveness of latent opposition groups and produces stronger plans with a greater likelihood of implementation.” Shifting to the developing democratic world, the same author reviewed a World Development Report from 1994 looking at rural agriculture and water supply development projects and found that participation from on the ground civil society organizations representing communities and the citizens themselves was needed to ensure the viability and stability of the project in the long-term.

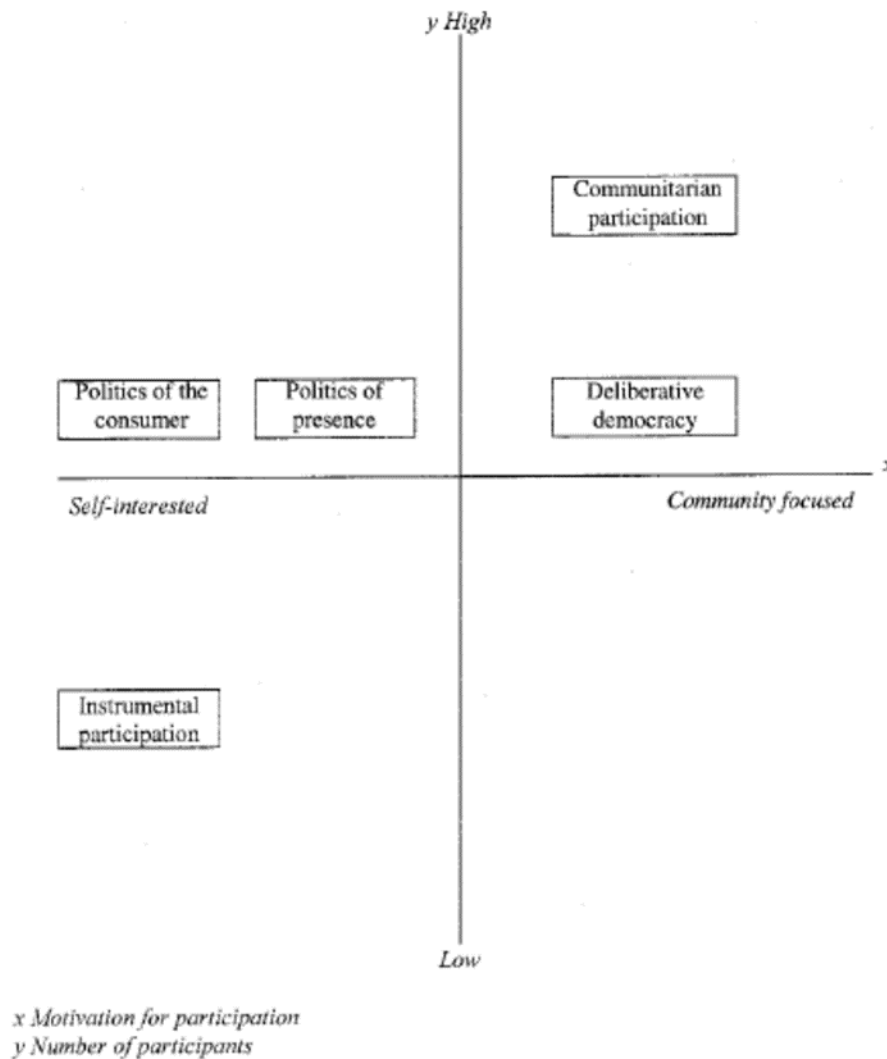
In an ideal local government-citizenry relationship-based model, there would be an open flow of information between public officials in a subnational government unit and those citizens who use and benefit from the services and good for which local government is responsible. This space for dialogue would allow for citizens to voice approval of performance of local democratic government and point out problems with services when necessary to their local officials. In line with the assumed motivations for participation is the drive for collective action for community problems. As with the domain of the state in Western civilizations, the potential charitable character of civil society, along with demands from citizens and levels of capacity can spur the public involvement of voters.

Types of Participation

By addressing the drive for civic participation, the study can better assess levels of public participation in local decision-making. Campbell and Marshall (2000) emphasized dialogue among the public and government officials in order to provide the “collective well-being.” Putnam (1995) found that in Italy, those regions with higher levels of civic involvement did better with economic growth and development, solidifying the importance of participation in

local decision-making. Though past studies have only concentrated on one-half of participation, either positive engagement or the negative effects of protest, it is this study's intention to treat them both with the same weight moving forward. Together they are an adequate barometer to the temperature of the government-citizenry interactions (Figure 2 found again below).

Figure 2: Rationales for participation in planning (Campbell and Marshall (2000) after Stoker, 1997, p. 167)



Civil Society's Importance. Based on previous research, this study expects several factors associated with building relationships between the citizenry and local government

officials. The most obvious is having the means of participation and a potential secondary outlet when the individual is not sufficient. Civil society organizations or CSOs can fill this need in order to bring the government's attention to problems that some part of the community feels are important. As such, when addressing the participation of the citizenry in the local government decision-making process, civil society represents a substantial tool in this relationship. The CSOs, consisting of grassroots organizations, local chapters of national and international non-profits, community and religious organizations, etc., act as a vehicle through which citizens can participate in the betterment of their community with government involvement, but also sometimes without. Although this is a concept that originated in Western scholarship, it applies to other contexts as well. For example, Chamberlain states:

Civil society may be understood as a community bonded and empowered by its collective determination to resist, on the one hand, excessive constraints of the society and, on the other hand, excessive regulation by the state. Although civil society is a relatively autonomous entity, distinct from both the state and society, it nevertheless partakes of both, and faces and constantly interacts with both. (1993)

Ndegwa (p. 2, 1996) stated that, "The impetus for the late democratic transitions in Africa has been traced to the growth and political activity of civil society across the continent." Larry Diamond offered perhaps the clearest statement of the rising preeminence of civil society in Africa in fostering political democracy: civil society, "has become the cutting edge of the effort to build a viable democratic order' (Diamond, Linz, and Lipset 1988, 26)."

The study anticipates membership in community organizations and social involvement to be important, as it is these informal structures which help keep accountability in tacked in the government institutions (Gurgur and Shah, 2005). The literature on civil society has begun to

address the ways in which these organizations and groups play a role in public policy and governance. In line with the assumed motivations for participation in decentralization theory, is the drive for collective action for community problems. As previously stated, in most Sub-Saharan countries public service encompasses more than government, with non-profit groups able to adopt the role of public goods provider when elected officials are inadequate. A poor performing local government from corruption, incompetence or under funding is not able to provide adequate support for several of the essential public goods, and in response citizens may increase their participation on the awareness of issues they feel are most important.

When civil society acts as a counter to the government in place, civil society can be controlled and steered by special interests. Decades of a disengaged citizenry did not make for a prime setting to launch participation-based development. Civil society is not necessarily a self-regulated space where those with the best ideas will always win out, but instead a “battleground” for actors (state, non-state, local, international, etc) and agendas to fight for power and support from the citizenry (Hearn, 2001). These actors include those at the state, non-state, local, and international levels. Makumbe (1998) explains the hurdles for an effective civil society in SSA continues to today as CSOs in Africa find their funding from international nongovernmental organizations. The impediments are not necessarily outside funding of internal opinions, but that those opinions may directly or indirectly be shaped by the well-funded external forces. INGOs and IGOs, along with the World Bank and the International Monetary Fund, can already direct some government action in developing countries through conditions in loans, and this control, positive or negative, does extend into the other half of public decision-making, that being the citizenry and their organizations. Hearn (2001) found significant control of the public on major national issues by well-funded INGOs in his three case-studies, Uganda, Ghana, and South

Africa. Though the real effect of the interference cannot be measured, it should be kept in mind when moving forward discussing the independent value of civil society as an instrument in participation.

Forgetting for a moment the external influences on the direction of a local civil society organization in Sub-Saharan Africa, members are not presumptively equal in the guidance of the objectives, muddying the concept of civil society helping to expand democracy. Being products of society, those local organizations can reflect the power dynamics in the environment making it difficult for the average citizen to have a voice that is truly heard at the discussion table, regardless of the developed or developing country. Those with both the financial and trusted standing in the community have the ability and time to steer conversation within the civil society organization. Using Michels' (1911) "Iron Law of Oligarchy," Truman in 1951 found that in the West many organizations do not necessarily represent the people's will and are often controlled by a few. Addressing the potential misuse of civil society organizations, Ndegwa (1996) states, "Grassroots empowerment through NGO development activities is crucial, however. This is where civil society's promise of contributing to democratic development in Africa should be rooted" (117). Though the recent strategy of development through empowering local officials does not necessarily induce new civil societies at the local level, civil society and government can build upon one another given the opportunity where both entities learn from the other's strengths.

Though critical of both the rigid and communal perspectives of networks, real public space is expected to fall somewhere between these opposites. Voter-based governments and non-profits need to balance self-preservation and the service-oriented ideals the organizations are founded on. Despite their helpfulness for heuristic purposes, models like Jung and Lake's or the

smooth/successful network examples of Weber and Khademian (2008a) should not be considered norms. Instead, networks and collaborative agreements vary based on shared goals, motivation and power of actors, the sectors involved, etc. When moving forward with networks and their management, individuals and CSOs should be mindful of how these actions relate to their intended purpose of representing or providing services for their target groups, an important point neglected by authors in this selection.

Decentralization

1. Are individuals in areas with high levels of financial and political decentralized decision-making are more likely than others to participate in local governance?

The most prominent development strategy currently affecting the democratic institutions within Sub-Saharan Africa is decentralization in some form or fashion. Ribot (2002) assessed political decentralization as drawing powers to government officials who better represent the local population through elections with the assumption this will “increase public participation in local decision making” (p. ii). Bahl and Wallace (2005) outline the theory, rhetoric, and practice of fiscal decentralization in developing nations while articulating potential constraints to the policy’s growth. While these studies, along with Bahl’s collaboration with Linn (1992), establishes the lack of and reasoning for little fiscal decentralization in developing and transitioning nations, Bahl (1999) highlighted the likelihood and need for citizen participation when there is fiscal decentralization. His implementation rule #9 discussed the need for getting fiscal budgeting freedoms close enough to the local citizenry so they observe how and for what public services the finances being spent and hopefully participate in the decision-making process for selecting these services. Crook and Manor (1998) found decentralization to have a significant relationship with local participation along with several locally based variables and local

government performance. Cheema and Rondinelli (2007) incorporated the importance of local characteristics in participation in decentralized systems. This furthers the argument that government institutions and citizen focused variables are important in participation. Though the study does measure problems specific to an area in the Authority dimension, this research does make the assumption that sub-national units will in practice have unique problems justifying the division of the country into sub-national governments.

In 1900, a founding father of the study of Public Administration, Frank Goodnow, explained, “in all governmental systems two primary or ultimate functions of government, viz. the expression of the will of the state and that will.” Though the political/administrative dichotomous orthodoxy Goodnow was advocating for in the government realm has all but disappeared, in both modern political science and public administration, the connection between the people’s will and execution of that will through government action still holds true. Obviously, without a clear understanding of the people’s priorities, there is no sound and effective implementation of those priorities by government officials, local and national. With the push from centralized national systems to democratic decentralized subnational systems in developing Africa, public participation has grown more crucial to understanding that local public will in terms of fulfilling several of the potential benefits of decentralization.

Along these lines, Lindblom’s “The Intelligence of Democracy” (1965) concisely sets the argument for decentralization and participation. The author parses policy creation and implementation into two frameworks: Centrality and Partisan Mutual Adjustment. Centrality as a rational coordination method is a comprehensive decision-making process. The coordinator needs to have a comprehensive overview of the situation, possible solutions, and possible effects of solutions. As Lindblom explains, however, one can never be in complete control as they are

always thinking about the reaction of subordinates and limited by past decisions. Centrality, defined as one person assessing problems and calculating solutions, is not adequate at problem-solving as the coordinating leader has a restriction in what he knows, experienced, and previously decided, so he looks toward others for arguments. These limitations are similar to Simon's (1957) description of bounded rationality. As the individual will never have enough information and viewpoints for a comprehensive analysis, a synoptic technique is impossible (Lindblom, 1965). Centrality's inability to fully understand the impact of the problem and solutions on all involved actors jeopardizes other perceived advantages of the strategy like stable criteria for decisions and consistent patterns in decision-making.

The other option, partisan mutual adjustment, is not as easily described or summarized as centrality. Coordinating decisions and their implementation occur in tandem in this method and cannot be distinguished from one another (Lindblom, 1965). The diverse, self-interested actors involved in the adjustments come together based on common values or areas they view important potentially leading to partisan discussions and possibly agreements. In terms of local governance in decentralization, there are government officials, civil society organizations, businesses, and individuals with public problems that each of the respective groups see as important, work towards the specific objectives of solving. Lindblom argues partisan mutual adjustments are useful in highly complex decision-making processes, providing an alternative to the unachievable synoptic method (or a thorough and comprehensive method). Changes occurring in the described pluralist system are only incremental and not radically different from the status quo. Lindblom also characterizes decision-making under the strategy as fragmented, serial, and remedial (147&268). A problem is often revisited in a public space, which are "wicked," several times, reshaped, and then new vantage points incorporated.

Though centrality may appear an easier method of the two to implement, given the conflicting opinions of actors in partisan mutual adjustment, Lindblom believes the opposite is true. The multiplicity of views and interests helps to anticipate and alleviate negative consequences. With the multitude of actors, efforts bungled by some groups in the decision-making process are fixed by others. The open and uncoordinated space for policy decisions grants opportunities for even the smallest group to still have some value in the process. The competitive, pluralistic environment encourages groups to create alliances and form constructive agreements in decision-making, while allowing room for potential change in the future, as no decision is infallible. Anticipating backlash from critics, Lindblom defends Partisan Mutual Adjustment extensively by differentiating problems with weighing values and problems with Partisan Mutual Adjustment. This potentially more effective method only works if local stakeholders are pulled in and participate for the betterment of the decision-making process.

Based on the failure of Centrality in the history of African governments, Partisan Mutual Adjustment may be the superior theory within the contexts of this study. During the Cold War, the United States and the Soviet Union preferred strong dictators in Africa over difficult to control democracies. Though several other factors influenced the stunt in development during these decades (e.g., young institutions, civil war, corruption), central leaders with narrow understandings of government and policy were arguably the main cause of the lack of development and the precursor of the other factors (Meredith, 2011). An example of Partisan Mutual Adjustment's benefits includes filling the void of a failed centrality; during the reigns of Amin and Obote in Uganda, the central government had little positive impact on communities. Citizens took it upon themselves to share ideas, debate issues, and determine what is best for their communities (Brett, 1994).

The move to a more decentralized system means to encourage popular participation in helping district officials to develop strategies for curing the ills of the area. However, the current levels of local political dialogue exercised by citizens look grim for SSA. Instead, the divide between government and the citizenry appears to continue to expand. Crook and Manor in 1998 performed an extensive research study with an examination of four developing nations as case studies on how decentralization has been associated with participation, along with what details of decentralization may be most important in enhancing the performance of the local political bodies. Though the authors found participation enhanced in the decentralized cases, they also found relationships between these variables, performance of local government, and variables like perceptions of local government, inclusion, and personal finances, which help to reinforce the need for variables consisting of citizens' views and relationships with local government and individual characteristics.

On top of a poor consideration for the complexity of decentralization, the context also needs addressing before any movement forward. In a comparative study looking at Ghana, Haruna (2003) found that the environment in which the actions or negotiations or orders between the levels of government matters to the success of decentralization. The author reaches back into Public Administration literature arsenal, using Mary Parker-Follet's law of the situation in 1924. The argument being that for leaders to expect their decisions carried out, they need to understand the situational environment of those expected to carry out the decision. Garcia-Zamor (2001) argued that the main reason strategies have failed in the past and continue to the future is the lack of understanding what is happening on the ground between the citizens and the government. The author's argument uses the unrest from SAPs as an example, but several are found here in decentralization.

Fiscal

Beyond the question of context, fiscal decentralization is at the very least an intricate system of revenues and expenditures, intergovernmental transfers, and a pull and push relationship between central and local governments. The battle, as much as there can be in public finance, requires a balance between local and central on what revenue is assigned to each level (Bird, 1993). As is seen below, an imbalance can cause a loss of public input.

Ideally, expenditures should be discussed first, as finance is meant to follow function (Bahl, 1999); however, the rule is rarely followed in the developing democratic world. Central governments are more than happy to move expenditures farther down the government ladder (Shah, 1994). We saw this with the former soviet countries as the national level were trying to balance their own budgets (Bird, 1993). The theorem for decentralization often cited for guidance on the fiscal side in general is Oates (1972) states that jurisdiction should be minimum geographic area where benefits and costs are absorbed. National governments should be worried about costs such as defense and national infrastructure, while state or regional should be focused on safety nets and basic needs like education and healthcare (Shah, 1994). Unfortunately, this balanced is ignored and local governments are told what to do. Garcia-Zamor (2001, p. 64) found that though local governments are often designated planning and managerial duties, the central government does not supply the financial resources nor the qualified staff to fulfill their responsibilities, leaving local officials not wanting to do anything without central government leadership.

The failures are more salient on the revenue side. Bahl and Linn (1992) determined that one of the main reasons why decentralization is inadequate is that local government is not allowed to take advantage of the entirety of their tax base. The assumption is generally that

central government will take the high impact taxes (PIT and sales) while subnational focus on the fees, special benefit taxes, and property. The result is local government not having adequate revenue on hand (Bird, 1993). Researchers have recently challenged this assumption of central superiority with the recommendation of a subnational VAT and business VAT in those countries which are large enough (Bird, 1999). Such a tax, piggybacked on an already established national VAT, would allow some financial independence for the local governments and place a higher level of accountability between the citizens and the local government. Without the citizens seeing the tax being taken and the services that they are receiving for those taxes, the notion that officials are compelled to spend revenue responsibly and efficiently for fear of local retaliation (loss of election) loses value.

Unfortunately, the local government does not typically have the revenue to match expenditures, leading to intergovernmental transfers. Such transfers are meant to meet the needs of the local governments and encourage a certain level of public service. The spillover argument states that some SNGs will produce a service which citizens outside their district lines will benefit and in order to keep the local level producing at this rate, central government transfers funds. With equalization, there is an acceptance that some local governments do not have the revenue raising capacity to meet a pre-established level of minimum service. The central government will therefore transfer the funds. However, Shah (1994) stated that no developing country had put in place a formula or set criteria for either of the causes of intergovernmental transfer, leading to governments negotiating based on political power and leading to high inefficiencies. The same can be said for matching grants. Dickovick (2011) chose to focus on SNG revenue from constitutionally mandated central government sources (pg. 66); however, this study has come to understand that these sources rarely are implemented as intended even when

placed in the constitution. Therefore, it is more effective to look at locally generated revenue, as it shows buy-in and capacity.

Political

Why has decentralization failed in so many countries desperate to find ways of developing? Sadly, leaders both at the national and international levels have underestimated the complex and content relevant nature that decentralization holds. Garcia-Zamor (2001) found that, “Both of these features [adherence to a decentralized structure and the Weber bureaucratic model] are often lacking in the bureaucracies of developing countries. Even when they are formally present, in practice they are ignored by the bureaucracies” (p. 59). Mullins (2004) described it as a complex web needing coordination while Smoke (2003) warned that the strategy was just that and not a panacea that many made it out to be. The term decentralization is a tad broad as it contains unique yet incredibly linked facets which are: political (local elections and some civil society) and fiscal (revenue and financing for services) (Cheema and Rondinelli, 2007).

After analyzing all other potential variables, Olson (2003, p. 399) determined, “The only remaining plausible explanation is that the great differences in the wealth of nations are mainly due to differences in the quality of their institutions and economic policies.” Decentralization and its dimensions are central policy and institutions believed to be responsible for participation and development indirectly. At the core of these decentralization strategies is the goal of transferring control over local issues to the local populations, where at least partially autonomous and democratic officials wield means and authority over tasks (Manor, 1990). Though the exact approach may vary depending on the context, it almost always involves the transfer of powers over resources and other local decisions, with reasonable autonomy from the central government.

The results for the individual nations and all nations includes the aspects of decentralization's relationship with the Participation index, when possible, and their combined effect. A lack of relationship between these facets and participation questions the validity of the argument that decentralization raises development, and perhaps find solutions in the dimensions focused around local experiences, perceptions, and individual characteristics.

Local Characteristics: Experience, Perceptions, Relationships, and the Individual

Local government institutions in democracies rely on the public not just for a better understanding of the problems requiring solutions, but their validation to exist as well. For a public agency to work in an effective manner toward the goals set out for it, the organization needs to have a positive standing among the public and those stakeholders and stakeholder organizations around which it functions (Rainey and Steinbauer, 1999). This notion is not alien to those read in organization theory literature, as the only shift is a purely public vantage point. In the case of any entity that cannot be closed off to the outside environment and actors, these conditions in which it operates directly affects quality. For the purposes of local government organizations, a resistant, obstructive citizenry and civil society risks the institutional credibility of the political and bureaucratic administrations, and potentially paralyzing local solutions to local problems. The dimensions addressed in this section have little constraint by central government control and are more about interactions and views built over time. Based on the results of the study, officials may need to be more pro-active in their engagement with the citizenry, as perceptions build. Additionally, the officials may only be able to be reactive to the factors, if it is a personal characteristic that the officials have no control over.

Individuals in the Public

2. Are individuals with certain demographics more likely than others to participate in local governance? (Financial Involvement, Fiscal Power, Politics, Ethnicity, Age, Gender, Education)

In 2007, Moehler sought to understand what may have motivated individuals to participate in the creation of Uganda's most recent constitution. Though it was one moment in time, Uganda's constitution-making process spanned the entire country and was soon viewed as a comprehensive attempt to have all those who wished to participate to participate. As such, Moehler's research can act as guidance for this study regarding citizen's individual characteristics impact on participation. Norris and Mattes (2013) reaches back to Lipset and Rokkan in 1967 to describe even Western Europe's party support built around social identity which includes those things seen by a citizen as distinguishing them from another. To a varying degree of significance, the author examined the following: poverty (Fiscal Power in this research), ethnicity, age, sex, and education. Additionally, Mullins (2004) makes a strong and thorough argument for Financial Involvement as an influence on participation, holding a similar rationale to Moehler's poverty and is included. Lastly, Stokes (2007) highlighted the importance of political affiliation in the power dynamics of governmental institutions, particularly in developing nations. The inclusion of both Mullins (2004) and Stokes (2007) arguments will provide a more comprehensive model for citizens' individual characteristics.

The assumption that those with financial involvement in the public services are more likely to participate in which and in what volume officials select services is well embedded in the public finance literature. Bird (1993), found that this "bottom-up" accountability benefits government through "local responsiveness and political participation" (208). Though the study

does not have the amount each individual invested into local government, given the high levels of poverty, the act of having to pay taxes is a strongly distinguishable variable. Classic public finance literature including Tiebout (1956) and Oates (1969) have discussed the role of pricing, through taxes, of the quality and quantity of public services. The belief being that citizens will act as consumers and look to the public services being provided and their quality as a package of goods and the taxes they will pay as prices. Interpreting the Tiebout model and Oates' follow-up with property taxes and public budgets to local governments in developing countries, there is an expectation that when citizens do pay into the local services, they will have a vested interest in how those services benefit them.

Financial involvement and financial power should impact a citizen's participation in the public space. Though participation is most optimal when every demographic/ financial class is involved, participation is most likely when the citizens have invested financially into the public sector (Brynard, 1996; Mullins, 2004). Those with little in the way of finances are not likely to spend their resources on the government and may not feel invested enough to participate. However, several of the public services are directed toward those in poverty.

This draws the study to the next question of financial power and the role of haves and have nots. Subnational authoritarianism has been well-documented in developing countries with those more well to do being able to dedicate their free time (as they have more of it than the poor) and influence leaders with their finances (Wiarda, 2003). While participation from impoverished populations is most ideal, it is likely that the wealthier a citizen is compared to others, the more likely they are to participate in the public space. Garcia-Zamor (2001) determined that there are two realities for citizens in developing countries: those who are the elite that can afford to spend time in government, and the poor who spend none of their time

participating in politics because of a primary focus on work. For instance, researchers in Uganda have found an indifferent relationship between the populace and district officials when it comes to political participation. Citizens blame the district's lack of regular meetings for their apathy toward the process and district officials blame the low attendance for the lack of meetings (Lambright, 2011; Golooba-Mutebi, 2004). Education is a likely influence on participation because as someone becomes more educated, they are more likely to understand complex problems facing central and local governments. This understanding of problems makes their entry into the public space easier and more impactful as their input translates more easily to results.

Those demographics which citizens have little control over are ethnicity, age, and gender. Age and gender are simple enough to explain. Lambright (2011) found that the older an individual is the more likely they are to participate in local government. As one ages, they spend more time experiencing and discussing local public services and begin to engage the decision-making for these services as these aspects increase over time and the potential for free time also increases. As women are more likely to spend their time in markets, discuss politics with others, and deal with household issues they should be more likely to participate in the public space (Wantchekon, 2003). The most intensive variable regarding passive traits can be the citizen's ethnicity and its power dynamics within the local environment and national have been acknowledged as important in the relationship of citizens with governments, local and central. Just having ethnic representation in government can bring stability to said government revealing the importance this trait still has (Arriola, 2009). Ethnicity has been used to raise support for some politicians and disdain for others, sometimes with violent ends. Like political parties,

ethnicities do have pasts with governments and some broad stance with governments of the present.

Public Relations and Public Perceptions

3. Are individuals who perceive local officials negatively and/or had poor experiences with the officials less likely than others to participate in local governance? (Accountability, Corruption, Confidence, Approval, Fair Treatment)

In 2009, Zhou and Zhang examined the role of civic engagement on local governments in Sierra Leone, and how views and experiences with local officials are associated with such engagement in rural populations. Within the study, the researchers looked at the following variables, which proved to be significant, relating to citizens' perceptions and relationships with local government: Confidence through accountability, Trust, and Ability to influence local government officials. The study splices out and expands on these variables to also include Corruption and Approval based on support from seminal works from Ekeh (1975), Bratton (2007), and Crook and Manor (1998).

Thurmaier and Wood (2002) continue this unraveling of strict power toward alternatively a decentralized nature of networks in their study of the Kansas City Metropolitan Area (KCMA). Though factors such as authority, resources, and legitimacy are important, trust is what keeps the actors in this case interacting. Yes, the central actors of one network do influence the groups' directions, but those lesser organizations along the periphery are gatekeepers to other networks which are possibly needed for future endeavors (p588). Studying a network in isolation negates the intended benefit of information sharing through continued interactions and sharing of new ideas from new experiences. Thus, power is always shifting and is determined by circumstance and perspective. Instead of a competitive group of actors, there is a high level of respect, trust,

and expected reciprocity in the KCMA study. The genuinely communal/cooperative environment in which the case studies exists, directly threatens the argument of innate power conflicts for networks.

The increased levels of comfort for interagency relations discussed above can further be explained and given more weight by Romzek et al. (2012) in their study of the informal rules and codes directing well-established networks. Actors, such as those in Kansas City, develop through trial and error common practices for how to interact with others in the network. The possibilities range from sustained communication to extending favors as rewards and possible informal sanctions when an actor breaks a rule (p445-447). However, as the interdependency of network actors deepens in these cases, caution should be expressed for the persistent need for accountability of individual agencies to their clients. Though focused on the unique realm of emergency response, Koliba et al. (2011) acknowledge the immense difficulty of finding accountability in networks. In their discussion on governance networks, the point is expressed that once power leaves a single set of hands, determining which organization is finally responsible for success or failure becomes complex (p211). Regarding the Kansas City example, the level of networking comes with benefits of information sharing, new outlets for resources, a pool of potential partners, etc.; however, there are threats to accountability when the boundaries and responsibilities of distinct organizations become ambiguous.

The need for some centralization within networks is present in KCMA's use of the Mid-America Regional Council (MARC) and Weber and Khademian's promotion of collaborative capacity builders (CCBs). For the latter authors, the described network leaders need to have the ability to receive raw information from the varying actors, integrate it into knowledge useful in fulfilling the network's overarching goals, and then re-disperse the final product to relevant

agents (2008a). In an additional article, Weber and Khademian (2008b) develop common characteristics/practices of CCBs. However, the authors spoil the opportunity to explore needed traits of network leaders by using rather mediocre cases which do not exemplify challenges in collaborating opposing forces. Also, a limitation of the Weber and Khademian articles is the necessity of CCBs to have long, extensive knowledge of the problem and deep-rooted respect from potential collaborative actors. In such cases, the builders are most likely well-established in the area and thus endogenous actors themselves.

The failure in Lambright's (2011) Ugandan example regarding communication between levels of government and the citizenry, highlights the additional determinants to public participation beyond that of policy. The public environment in which a government intends to operate can propel or retard the policies of local government officials. As previously mentioned, engagement and support from stakeholders are of course needed in a democracy; however, a comprehension of the public values in the area are of foremost importance. Nabatchi (2012) found that the public is often left out of the compilation of what the public values are, and instead, often coming from central governments in developing countries, the effect being a disconnect between local government and the public environment regarding these public values, which is ideally conjured through political and administrative debate. The simplest and most obvious solution to this inefficiency in government efforts doing the public's will is to ask or rather encourage participation when developing this framework of what the community views as important.

Sub-national authorities in democracies rely on the community, not just for the deeper insight into the issues demanding answers, but additionally credibility for continuation. As a requirement for a public department to perform adequately toward its objectives, the body should

have a good reputation among the community, partners, and partner associations around which it operates (Rainey and Steinbauer, 1999). This approach is not foreign to the organization theory literature, and to obtain the field's understanding we simply require modifying to a social vantage point (reviewed above). As is the situation of any actor that cannot be closed off to the elements, the conditions in which the state acts directly influence capacity. Through a better understanding what drives participation from the public's environment and ideals and central policy, this study tries to aid current and future development policy with citizen engagement as a main component.

Chapter 3: Data, Models, and Methods

Introduction

The intention of this research has always been to better understand what can drive local citizen in developing Africa to spend limited free time participating and engaging in the local public space for the public benefit. Researching the level of participation, as it relates to diversity under varying conditions, helps determine when to expect an environment promoting impactful participation. The study then makes comparisons of regions with varying levels of relationships, demographics, and decentralization and between nations with different basic models of decentralization and experiences/perceptions/citizen characteristics. To address these important influences on development in democracies, the study examines the national and sub-national variables associated with local government relations in Sub-Saharan African countries from a quantitative perspective, as well as three case studies. As explained in the literature review and analyzed in the case studies, actual capacity and descriptors of citizens and the actual and perceived capacity of local officials by said citizens are believed to matter most in this decision to act. The hope is that some leaders (national and local) will absorb this research and readdress their goal of public participation accordingly, this is, of course, a crucial goal of development in Africa today.

The following hypotheses offer a summation of the intentions for this chapter and the study.

H1: Increasing levels of decentralization (Fiscal, Political) will have a positive relationship with participation in the public space

By moving decisions about public problems closer to the local level, citizens will perceive their participation and input as having more of an effect on local public policy and will, therefore, choose to participate further.

H2: Citizens with more conducive demographics (Financial Involvement, Fiscal Power, Politics, Ethnicity, Gender, Age) to public participation will have a positive relationship with participate more in the public space

Citizens perceived to be in positions of power either through personal finances, knowledge of institutions, or shared traits with those in positions of power in local government, are more likely to participate in local public decision-making. The citizens have easier entry into the public space, more free time to dedicate to public decision-making and more ability to be heard.

H3: Citizens with more optimal perceptions of and relationships with local officials (Corruption, Accountability, Confidence, Approval, Fair Treatment) will have a positive relationship with participation in the public space

The decision to participate in public decision-making is, to some degree, based on individuals perceived and actual experience with those local leaders involved in the public decision-making.

Attempting to answer these questions will require the use of available survey and fiscal data. For example, the Afrobarometer's survey of citizens focuses on several of the issues contained in the above questions, conducts itself in a vast number of Sub-Saharan nations, and details individuals' locations down to the sub-national level. Additionally, Uganda, Tanzania, and Ghana have readily available sub-national budgets, which allow for fiscal analysis at the local level. This strategy with the data will address the research questions by allowing an extrapolation from individuals' views and demographics and sub-national governments' policies to make statistically grounded comparisons within and between nations.

This research examines the most basic elements of participation and its most foundational importance to decision-making, making this research important to the participation and development literature. The previous literature review discussed an expansion to current issues of participation in the developing democratic world. Before the quantitative analysis, the case studies granted a better understanding of the interworking of central government policy, local citizen characteristics, and local government relationships with the citizenry. Not any one variable/question found in the Afrobarometer data adequately addresses the complex and

intricate concepts the study believes are associated with levels of participation. The study first form the variables through which relationships with participation are examined by utilizing questions from the survey believed to be correlated with the latent variable attempting to be captured through factor analysis. For instance, Fiscal Power requires understanding citizen's perceptions of their wealth, that of others, and the nation. In this example, having these variables factor together helped to create a quantitative representation of the respondent's level of fiscal power. Once these analyses were completed, the study conducted an Ordinary Least Squared regression for the collection of countries and then individually for the three countries of interest, in order for the study to be able to better understand how the factors may impact individuals' levels of participation. The purpose of these steps is to quantify latent variables through statistical rigor, and once measured and formed thoroughly and intently, the study can then examine these factors' relationships with the respondent's level of participation in the public space. Assessing participation at different levels and from different vantage points helps determine an accurate picture of participants' role in the governmental process and general society.

Research Design

The study will test these three hypotheses using data from the Afrobarometer's public attitudes survey.⁴ The Afrobarometer surveys gauges public attitudes toward government, democracy, and reform in African countries. With international backing from a variety of international NGOs, the Afrobarometer is now the leading survey research group in Africa and as such, is arguably the best source of data on public opinion on the continent. This survey was

⁴ See www.afrobarometer.org. Website accessed November 7, 2016

selected based on its 18 years being conducted on the continent, its expanse across Africa, its relatively uniformed questions throughout each nation in a round of the survey, rigor for statistical accuracy for a nation, and relevance of the survey questions to the study. Additionally, to better understand the background, demographics, and institutional makeup of nations and how they may be related to participation, the previous case studies set the scene and supplement the quantitative analysis.

Sampling Data. One of the primary benefits of the Afrobarometer data is the rigor of the sampling method. The sampling frame for the survey consists of all voting-age citizens within a given country. The survey is administered using stratified random sampling in four stages. The first stage randomly selects “primary sampling units” that stratify on key demographic variables in order to reflect the primary sampling units across the country on key demographic and geographic dimensions. The second stage randomly selects sampling starting points, followed by a third stage, where the enumerators randomly select households for participation. The final stage results in the random selection of individuals within households. According to Afrobarometer, a sampling between 1,200 and 2,400 produces a margin of sampling error that is $\pm 2.8\%$ at the national level. Because of the strenuous steps taken to have a representative sample, each round in a country can be handled as self-weighting.

Every Afrobarometer conducted interview identifies the respondent’s ethnicity and subnational government of residence down to the village in order to gain a proper national distribution of the demographic. The enumerators ask the citizens a broad range of questions, along with a checklist for the surveyor on the conditions they witness while administering the questions; along with addressing questions dealing with the current level of public participation, perceptions of, and relationship with, local and central governments, and the respondent’s access

to public services, along with demographic information (e.g. ethnicity, wealth), as previously discussed. Though each round of the survey and each distribution to a different nation contains a slight variance in the theme of inquiry, the core questions regarding views on performance and relationships with the local governments and the current level of public participation remain comparable across the distributions. A list of the potential questions used to operationalize the variables reflecting participation are below.

Sampling selection. In order to address and gain a better understanding of these questions, the study undertook a collection of strategies. This research assesses the broad status of development regarding local government relations, public participation, and decentralization (fiscal, political) for a significant sample of those developing nations claiming a decentralized format. Fortunately, the 35 African nations partaking in the Afrobarometer Survey includes the countries of focus, specifically Uganda, Tanzania, and Ghana which have case studies. These data-sets, supplied by the respective barometer and composed of 1,200 to 2,400 observations per nation, allow the study to address the pressing issues of citizen views of local government (e.g. confidence, corruption, effectiveness), as well as inquire about individual citizen characteristics addressed in the model under the second hypothesis. As previously stated, to understand the development context, the study uses relevant information from three specific nations for easier comparison.

Additional data. In addition to the Afrobarometer, the study added other sources of information to the dataset and used in the model. As previously explained, this research used and added available subnational budgets to the individuals in the respective subnational levels. When possible, the study uses the percentages of budgets being made up of local revenue. The percentage grants the best picture of local fiscal freedoms of subnational governments.

Additionally, the analysis addresses the general concept of political decentralization through the individual dimensions of spatial decentralization and political strength (voter turnout). While the Afrobarometer covers citizens' views, politics, and their demographics, it does not account for the demographics of the area nor the politics of the local government, a crucial component as political views have been deemed important for this research. Thus, the study creates and includes variables which address whether the citizen is the same ethnicity as the majority in the subnational unit and if the citizen is of the same party as the local head of government. The theory being citizens will have easier access to and more likely to be heard by local government officials if they are of the same party or ethnicity. Collective data from the Afrobarometer survey at the local and regional level, with most recent local election information from national electoral commissions.

Limitations. This study does its best to use all available data and some that are not. For instance, the author made phone and email requests to multiple ministries within multiple national governments to obtain local government budgets. Unfortunately, due to a lack of response or even full websites being down indefinitely, information beyond the primary dataset has limitations. Understanding that there are gaps in the data, despite the researcher's many attempts for it to not be the case, the study tries to compensate with other methods. Additionally, the researcher took these limitations into account when first planning this research. For instance, the 9 nations began as the 35 nations from the Afrobarometer but narrowed down based on stability before and after data-collection (i.e. a lack of political uprising or constitutional reform), applicability to the rest of the continent, familiarity with the international public, the researcher's ability to explain the specific country's national situation in a timely manner, and usage of the mainstream international development strategy of decentralization. For instance, Nigeria alone

could be a research study with its own unique complexities. However, this would be a detriment to the study's overall benefit to the fields of international development, as Nigeria is unique in resources, ethnic power-sharing, and history reducing its applicability to other nations. From these 9 nations, 3 had publicly available subnational budgetary data used as in-depth case studies. This budgetary data is crucial when it comes to handling fiscal decentralization.

However, the information provided in the surveys and the questions which remain consistent throughout the nations still limits the study. As the barometer is distributed in several African countries and focuses on different key issues, the direction of the survey changes slightly from nation to nation. Fortunately, the barometer is relatively consistent in questions of participation and general performance of the government.

As this is cross-sectional data, causation of most independent variables on participation in district decision-making cannot be concretely established. For instance, it is entirely possible that citizens have more confidence in their officials because they are actively engaging in the public space through participation. Therefore, the current research can only establish an association and attempt to explain possible causation through theory.

Methods

Case studies first laid out key information the study believes may impact factor loadings. This study then utilized statistically strenuous factor analysis to form the necessary variables originally latent in the data. As several questions make up one variable, the study performs an extensive factor analysis for all and the individual nations with additional analysis of factor scores and structures before moving into the regression results. This study then used Ordinary Least Squared regression to test the relationships hypothesized above. The research runs the regression with robust standard errors to alleviate problems associated with heteroskedasticity.

The primary methodological threat in the analysis is potential for endogeneity. These data are cross-sectional, which prevents the researcher from taking the precautions necessary to ensure that estimates are not biased by a correlation between independent variables and the error term. For example, an individual who participates in community groups may report problems with the running of the government because of exposure to information about government operations through his involvement in the community. Another example illustrating endogeneity by an individual who participates in community groups and therefore asks the local government to “listen” more frequently as a result of this membership. If these relationships are endogenous, the coefficients could be biased and standard errors deflated, leading to artificially significant findings. As a result, the results below are taken with appropriate caution along with an understanding of the secondary regressions run with participation as an independent variable.

Factor Analysis. With such an extensive dataset, including 9 individual nations and with several variables affecting latent independent and dependent variables, there was the challenge of calculating their impact in the model. Based on the theoretical constructs presented in the literature review, there are strong foundational arguments for how and why variables will coalesce in a factor analysis. The study expects several of these unobserved factors to be given new light from how the data correlates together (e.g. participation, citizens’ experiences with problems and officials, and individual characteristics). The intent of this analysis is to understand the underlying factors, and just as important, the impact of each variable in contributing the factor (i.e. its weight). By examining the index of the participation factor in each individual nation, the study can best understand how citizens-at-large choose to participate and what may influence that decision by inference from other variables and national characteristics/history.

As each nation will have different values being placed into the overarching independent and dependent dimensions, there was the additional concern that individual nations (i.e. Ghana, Uganda, and Tanzania) may not be comparable. If different variables may have a varying impact on factors which become the independent and dependent dimensions of the model, it would not be accurate to compare these dimensions'' relationships between countries, as the construction of the dimensions are different by country. In order to mollify these concerns, the study conducts factor analysis of the total 9 nations attempting to construct operationalizations of these dimensions into indexes. To allow comparisons between the three nations factor analyses were conducted overall, and each selected nation. Then the study uses these correlations to calculate standard deviations and z-scores. Using z-scores refines this analysis through the comparison of nations to their respective means which helps allow the variables within the indexes to be compared amongst the nations. The research finds the factor analyses first in the results. The study then adds these indexes to the datasets and run in the models for the different nations.

The present and historical national frameworks of government, structures from the capitol to the ground, can also help explain how citizens participate in the public space, as it can influence their views on formal government structure, community involvement. Additionally, how citizens view and interact with government and where citizens place their confidence in government's ability to implement policy and their satisfaction with that policy is incredibly important when attempting to understand the values for different forms of participation. By examining the factor analysis for each nation and seeing where citizens believe the power is located, who is accountable to whom in government, where power is and likewise for satisfaction, how well satisfied citizens are with different levels of politicians and policy, the

study can answer these questions. Below you will find the associations for the variables making up the capacity, participation, and satisfaction factors for the respective nations.

Having different correlations for factors between nations can have several explanations not included in the analysis. Differences in public institutions should explain associations distributed between levels of government and/or civil society. The study can find clarity on issues of trust and corruption in the background and history of nations. The research should give issues regarding problems and approval of centrally and locally provided public services better insight from central (and local when available) government budgeting allocation and local when available. Analyzing these datasets will provide an in-depth and comprehensive understanding of the factors of the countries focused on in the study.

Factoring Methods. To determine the proper variables this study performed an exploratory factor analysis for all potential variables on a sample of the datasets. Starting with 130 variables means several factors may be significant to the structure of the underlying model, and as such, the study lays out a criterion for selecting different factors before running the analysis. Only those factors with Eigenvalues above 1 will qualify (Kaiser's criterion), but no more than 20 as at some point it becomes unwieldy. However, it is possible that 20 factors will not correlate for a nation or all nations, and in those cases, the study will take the number which did correlate, but not restrict other nations to that number. The entirety of the model will not be explained in a reasonable number of factors for this discussion, and the study will cut off the factors at 95% proportion of the variance. Also, factors with at least three significant correlations are included.⁵ The study highlights the factors relevant to the study and reasonably

⁵ If only 1 or 2 loads are significant, perhaps the variable should simply stand alone in the future analysis.

understandable by theory. In order to better refine the relevant factors, the study will additionally conduct an oblique rotation to create fewer variables with high associations, understanding both that the purpose of the analysis is to create an index and the factors likely have some correlation. In line with the correlation of factors, the study will then construct a correlation matrix of the common factors to better understand how they relate to one another and if some are redundant, the study removed them for parsimony. An added benefit of the correlation matrix is its guidance when conducting a factor analysis on subcategories. Though the factor analysis is meant to bring clarity to the underlying structure of the model, those variables not explained by this analysis will not necessarily be eliminated from the overarching regression, just as the study does not include factors meeting the above criteria but have no theoretical explanation.

Replacements. In order to best address the research questions in this study, several steps were taken to preserve as much information as possible while also making data more usable for this study. Regarding the recoding of the data, the “Don’t Knows” needed to be addressed on a question by question basis. The goal was to not treat these answers as “missing” for two reasons: 1. They are technically not missing; and 2. A large part of this research is focused on perceptions by the citizenry of their environment and government actors. As such, much labor was taken to keep the “Don’t Knows.” A number of those questions containing “Don’t Knows” used in the model were situated with their answers in such a way that the “Don’t Knows” could be placed in the middle of what is a Likert scale once the data was recoded. For example, a question regarding how a respondent feels about a statement regarding the government now has answers coded as Strongly Disagree, Disagree, Don’t Know, Agree, Strongly Agree. For those questions which unfortunately could not be recoded into a Likert scale, the question replaced the values of

the Don't Knows, as well as the Didn't Ask and Refuse to Answer with missing. Missing stayed missing at this stage of processing the data, as they are few with a negligible effect.

As discussed in the Factor Methods section, the Factor Analysis requires a factor to have an Eigenvalue of at least 1 and allows only 25 factors to correlate. Each nation and all nations have their own expectations for correlations and they, along with the results, are discussed in Chapter 5. Those variables found to be significant for each dimension in each nation and as a whole are included in a factor analysis a second time only including the significant variables. Based on the results of this factor analysis, indexes were created for each dimension using the predict command in Stata. These indices will represent the scores of the original dataset and be used to confirm the results of the secondary dataset addressed below.

Unfortunately for the first set of indices, with two dimensions (Corruption and Authority Indexes) there are several missing due to observations having at least one missing (mostly "Not Applicable") for a variable causing a missing for the overall value in the index. Steps were taken in order to fill in the missing as accurately as possible. These steps include creating a secondary dataset which replaces those missing through chained prediction equations and xi: mim. The study then uses the factor scores from the original datasets to create a new set of indices by applying those original values onto the new dataset with no longer missing data. Factor scores from the original dataset (which did not replace the Not Applicable and simply left them missing) are required instead of a new set of scores for one very crucial reason. The missing values are being replaced through the above-mentioned process that analyzes correlation among the variables in the model to determine what those values may have been, while the factor analysis helps recognize the latent variables in the model by analyzing the correlation among the values in the present variables. Correlating variables for a factor analysis with several values

predicted by correlating the variables would over-emphasize the correlation in the factor scoring if the study did not create the secondary dataset increasing the chance of a Type 1 error.

Therefore, the study takes the factor scores of the original dataset (with missing) and apply them to the values of the secondary dataset, (with no missing). If done correctly, the index score of an observation which had nothing missing in the original dataset should have the same score in the second dataset. The results are used in the main model as the indices.

Despite several efforts to calculate to the datasets with complete indices in one program, the study required the use of an additional quantitative program, SAS, in order to form the datasets, while SPSS was used in a tertiary/non-quantitative role. With the use of SAS's Score Procedure, the study was able to determine the index scores of the observations with newly filled in missing based on the scores of those observations in the original datasets with the missing still in place. To replace the missing in the secondary dataset, the study utilized Stata's multiple impute chained equation command (mi impute chained). The strategy to fill in uses ordered logistic modeling repeated a stated number of times (in this case 100) creating a separate (100times larger) datasets. The variables containing missing are attempted to run in groups related to the factors in which they loaded significantly. Options to the command are added as needed to acquire a successful execution. For instance, perfect prediction requires "augmentation" which then includes some additional low weight observations to overcome this problem. The estimates (coefficients and standard deviations) are then combined to assess the imputed datasets. Lastly, the observations are merged down to the original number of observations (from 100 versions to 1) using xi: mim:, while maintaining the replaced values. The process is highly nuanced and time intensive but necessary for the study to maintain confidence in the replacement values. Multiple imputation holds several advantages for predicting the

missing values including the variability being more accurate for each value and that it considers variability due to sampling and variability due to imputations. Though the replacement is suboptimal, it should be noted that these values represent only part of the two indices being used in the main model which the variables are significant. If there are any problems, they should be subdued by the variables themselves' limited impact.

Once the indexes are made whole by the replacements, they, along with a number of one variable dimension (e.g. ethnic fragmentation, fiscal decentralization, and political decentralization) are regressed onto the Participation dimension in the respective datasets and then upon one another. The results will help to better understand the relationships between citizens choosing to participate and the perceptions and experiences they have of politics and their environment along with government policies, political and fiscal decentralization in this study.

Model

The study first conducted an intricate, multi-criteria, multi-staged factor analysis to determine the latent variables within the dataset which aligned with the expected influences on participation. With the factoring done and analyzed and additional data added, the below model has been run for each nation and them in total. The individual variables are addressed below. As explained and defended below, dimensions of decentralization are treated separately when possible.

$$\begin{aligned} \text{Participation Factor}_i = & \beta_0 - \beta_1(\text{Corruption Factor})_i + \beta_2(\text{Authority of Government} \\ & \text{Factor})_i + \beta_3(\text{Confidence in Government Factor})_i + \beta_4(\text{Financial} \\ & \text{Involvement Factor})_i + \beta_5(\text{Financial Power Factor})_i + \beta_6(\text{Approval of} \\ & \text{Government Factor})_i + \beta_7(\text{Fair Treatment Factor})_i + \beta_8(\text{Politics of LG})_i \\ & + \beta_9(\text{Ethnicity's Regional Majority})_i + \beta_{10}(\text{Fiscal Decentralization})_i + \\ & \beta_{11}(\text{Political Decentralization [Strength \& Spatial] Factor})_i + \beta_{12}(\text{Edu Lvl})_i \\ & + \beta_{13}(\text{Age})_i + \beta_{14}(\text{Gender})_i + \epsilon_i \end{aligned}$$

Expected Measures for Variables

Participation. Attempting the feat of properly measuring what is considered participation is best summed up by Roberts (2004), “Research on citizen participation produces a complex and untidy literature (Kweit and Kweit, 1981). As a contested concept (Day, 1997), it is not surprising that it is plagued with definitional problems. Citizen participation can refer to a range of different actions by different people (Pateman, 1970).” In 1969, Arnstein created the standard for measuring this interaction with a “ladder of citizen participation,” parsing out the level of power sharing for the citizenry allowed by the government. Academics have adopted some deviation of this model over the past 46 years.⁶ Moving away from the status quo, this study focus on what motivates individuals to participate at a particular level rather than the power the government allows them to have at that level.

While the original valuation of the individual variables was meant to be ranked based on amount of time and resources needed in order to conduct the act, a more accurate, and more in line with the positive development outcomes associated with local engagement, is framing the index based on “amount of participation,” when assessing the correlations in the individual factor analyses. This includes time and resources but also how the time and resources are used, mainly the number of interactions with fellow participants during the act. Campbell and Marshall, 2000 created a thorough typology and spectrum for what can drive citizens to participate in the public space. Figure 1 details groupings of participative actions along two criteria (axes) of “motivation for participation” and “number of participants.” From the perspective of this study, Communitarian Participation, and those actions it includes would be considered the greatest level

⁶ Choguill, 1996; Mostert, 2003; Rasche et.al, 2006; Swapan, 2016.

of participation. Individuals would be focused on the promotion of the common good and would be participating in multiple interactions with other citizens, stakeholders, and officials. Again, the reasoning for this change reaches back to the intentions of community participation in the first place, which is having the stakeholders and public officials better understand each other's views and how best they accomplish certain goals efficiently and effectively. Participation, as Locke and Latham (2002) pointed out, builds social capital along the way.

While each variable found in the index has its own unique value regarding Citizen Participation (e.g. voting being a benign and indirect form of participation), each has some collection of motivators, if only in the abstract. Additionally, we can form a well-researched argument on which means of participation citizens of a nation may use based on the mechanism available to them by the government and the civil society-at-large and the likelihood citizens may perceive available mechanisms to be effective.

Decentralization. The term “decentralization” covers a slew of government strategies and tactics. In order to not lose the unique qualities of the different uses of the term “decentralization” in nations’ development plans, the levels of power allocation and forms need assessing. A push for one form of decentralization and a neglect of the others may result in having one of Samoff’s (1990) factors and a decrease of local confidence in local officials.

Levels of the different decentralization categories (fiscal, political), as key variables to this study and this chapter specifically, are an index of several measures from respected research studies. For general guidance, Ndegwa in 2002, published an assessment and ranking for Sub-Saharan African for the respective categories of decentralization that is a great benefit in this study. The current usefulness of this data is questionable as it is over a decade old and nations change over time. For instance, an overhaul of Uganda’s decentralization system occurred in

2006 involving the role of national government in local affairs and budgeting. Though his rankings are now outdated and will need updating, another problem is that the author found in the rankings only marginal differences between one and two, two and three etc., thus making it difficult to distinguish.

Fiscal Decentralization. For fiscal decentralization, based on the availability of budgetary data, the significant measurement is the percentage of the subnational unit's annual budget for the year indicated in the Afrobarometer which originated from revenue raised at the local level. In other words, only finances raised at the subnational level and kept at the local level are represented in the fiscal decentralization variable. Revenue such as central government grants or INGO donations are not included. As previously discussed in the case studies, central government grants, even if "unconditional", typically come with conditions. Likewise, non-profits, though well meaning, are answerable to their donors and expect their finances to be spent a certain way. The study makes a firm distinction between money controlled at the local level and that which is not. This information is readily available by subnational governments for some nations, such as Uganda, but in other cases further work was required. The strategy for obtaining the data required calls and emails to the ministries of finance and/or local government, a time-intensive task already well-known to this researcher. Despite the efforts, only a few nations' subnational budgets were obtainable. Nevertheless, the study is examining district level differences so the restriction in national cases was not a hindrance.

How the revenue is collected could affect the relationship between fiscal decentralization and participation. For instance, though Uganda has "locally generated revenue", the bulk of their local funding was voided after the suspension of the graduated tax in 2005. Though the district can still set the rates and collect locally on things such as property taxes and collected locally.

However, the central government still needs to approve rates. In regard to property taxes, national law states that owner occupied, residential buildings are exempt, dramatically decreasing the tax base and increasing the disconnect between who is paying through taxes and who is benefiting. The restrictions also cause problems urban districts with businesses and hotels and more rural districts (Bakibinga and Ngabirano, 2019). Though not tested in the model, the nuance of how subnational taxation and expenditure is implemented at the ground level could be important for understanding the results.

Political Decentralization. In Stephen Ndegwa's "Decentralization in Africa: A Stocktaking Survey" (2002), the author measured political decentralization using an index which contained the tiers of subnational government directly elected in the respective nations, and the scores for direct elections of local government. While this study could include such an index (existence of direct elections, tiers, and fairness), the dimension only addresses the national status of political decentralization. Therefore, the study needs to use those measures which can be found to have variation as independent variables.

In order to attempt to address the variability of local political decentralization, an index was created containing two separate aspects of this decentralization, spatial and strength. Citing Prud'homme (1994), Kimr (2008) states, "Spatial decentralization is defined as a process of diffusing urban population and activities away from large agglomerations" (p. 5). Spatial decentralization has its own merit as a factor, while political strength at the local level, in terms of voter turnout, is well-known to scholars (Zhou and Zang, 2009; Awortwi, 2011), and even represents a part of Ndegwa's (2002) national index for political decentralization. Though there has been a fluctuation in recent cycles in African nations (e.g. Uganda dropped 10% from 2011 to 2016 and Tanzania jumped 25% from 2010 to 2015) elections (political choices) are still

regarded as crucial to democratic government stability and institutional development within the nations. The same benefits can be transferred to the local levels of government. These two aspects, spatial and strength, are assumed to have interactions given the ideal description of local governments being close to the citizenry with strong local support. Political strength heightens the effects of spatial decentralization in forming what, as a concept, is called political decentralization for this study.

In this regard, and assuming some level of heterogeneity of needs, spatial decentralization can be formed through the subnational units' population size, landmass, and urban/rural setting, allowing for us to control for this dimension; while the strength of political decentralization is found in local turnout in local elections. In line with the reasoning for more subnational governments, the smaller the size of the constituency represented by publicly elected officials, the greater the power individual citizens have both in terms of their vote and ability to contact the officials. It was one the most influential scholars on decentralization, Prud'homme (1995), who stated, "Population size obviously matters. Decentralization is more likely to be warranted in a heavily populated country, where secondary subnational units are bigger than many small countries. The same is true of geographical size" (p. 214). More access and citizen power are two of the perceived effects of political decentralization (World Bank, 2008; Kimr, 2008). In the same reasoning, distance from the local officials can also hinder citizen's influence over local officials.

Though the Afrobarometer does not cover the landmass variable, it is possible to ascertain landmass, and the Afrobarometer does cover whether a respondent lives in a rural or urban area. This is a suboptimal representative of this factor, as landmass is assuming an equal distribution geographically of respondents in the subnational unit; however, this is partially

mollified with the urban and rural variable, which additionally has the assumption that urban areas are closer to local seats of government. Additionally, urban areas will have different public service needs than those in the rural areas.⁷High voter turnout is not just a potential sign of strong citizen-engagement, it can grant power to the official who wins the election as it increases the probability those who turned out are an accurate representation of the entire citizenry. For instance, obtaining a majority in a higher turnout election is considered a credible mandate in the United States. Subnational populations, land size, and urban/rural representing spatial decentralization, along with political strength from voter turnout, should represent an adequate local political decentralization dimension, comparable to that of Ndegwa's at the national level.

Additionally, forms of decentralization can be found independent of other forms, and it should not be assumed that one is proof of another. Though decentralization as a concept includes fiscal, administrative, and political forms, rarely are they all found in abundance simultaneously. The compartmentalization of these strategies for decentralization in order to measure and analyze is well-documented in the development literature (Ivanyna and Shah, 2012; Kimr, 2008). The reader only has to look at the nations found in the case studies to understand how different forms of decentralization can be practiced separately and without other forms. As such, this study still attempts to treat them all together when possible, but not shirk from the need to parse out and treat separately the aspects of political decentralization. The compartmentalization will help in the effort to utilize all available data from the nations while also acknowledging that some data which would be beneficial to the study is not obtainable. Though political decentralization is less nuanced than fiscal decentralization, it should be noted

⁷ In order to control for varying the preferences for public services and public problems, the authority factor helps assess this impact.

the potentially innate relationship between politics, political decentralization, and citizen's participation.

Individuals in the Public: Financial Involvement. Financial involvement in public services by citizens helps to encourage these individuals to participate in the public space (Mullins, 2004). The logic is that those who are spending their finances (voluntarily through fees or involuntarily through taxes) on these services and goods are willing to also spend their time influencing which and how much of services and goods are chosen through limited local budgets. In an ideal situation, there would be exact figures regarding how much of the citizen's finances were invested. Unfortunately, the Afrobarometer did not ask such detail. Thus, the variables associated with this factor should be focused on whether the citizen paid into the system through taxes and fees and whether they understand the taxes they paid.

Regarding the variables which load in the factor (s) surmising the financial involvement of citizens in the appeal for accountability, there is a separate factor that emerges in the Uganda case around citizens' understanding of government finances. Overall, citizens most lack an understanding of how to pay the taxes they owe and how that government revenue is used for public service expenditures. The study finds an intuitive connection between this variable focused on understanding taxes and an additional included question regarding the difficulty in avoiding taxes. If a citizen does not fully comprehend the taxes being levied upon them and how those taxes lead to the public services meant to help them, it is unlikely the citizen has an adequate understating of the fiscal system to avoid paying the taxes. This poses a clear principal-agent information gap between the government systems and the citizenry.

Fiscal Power. Similar in theory, but different in reasoning for inclusion in this study to financial involvement is financial power. The literature review has established the control

individuals can have at the subnational level when they already have a significant amount of influence on the public through their economic success (Gibson, 2005; Wiarda, 2003; Garcia-Zamor, 2001). More affluent individuals can dedicate free time to influencing public decisions by talking to public officials and, when needed, provide a financial incentive/support. Though the individual's affluence is not quantified in the dataset, their personal comparisons of their economic situation and living standard to others in the country and to what they were 12 months ago are.

Political Affiliation. Based on past data analysis, when one of the main choices a citizen takes when he or she wants to solve a problem is to talk to a political party official over a government official, there is clear evidence that politics and party are important. The notion that a political operative can effectively resolve the local problems of a citizen to a comparable or greater degree than a locally elected official brings into question the capacity and authority of the subnational government. As previously stated, central governments in developing nations shirk from releasing responsibilities and resources to lower governments. In the same line of thinking, local political representatives of the party in national power can have more access to resources and people of power, as central actors are more assured of their loyalties to the regime. As such, the political party affiliation of the citizen and local government officials are accounted for while noting the central power for analysis.

Ethnicity. Researching the level of participation as it relates to ethnic diversity under particular development conditions will help determine when to expect an environment promoting the goals of this strategy. Now in measuring this variation in demographics, past research was a good guide. Easterly and Levine (1997) were able to measure the heterogeneity of a nation by determining the probability that two randomly chosen citizens would speak the same language.

Though this measure of heterogeneity is moderately accurate for the assumption that more ethnicities mean more fragmentation, based on Ndulu et al. (2008), the pure number does not necessarily mean political instability. The ethnicity of the individual needs examination in relation to the other groups represented by the local government unit in terms of portion of the population.

Despite several decades of attempts to professionalize public institutions in developing Africa, leaders still utilize ethnic divides in order to obtain or hold on to power in politics (Green, 2010). As such, ethnicity requires inclusion into the model and needs to be assessed as comprehensively as possible with all available data. The optimal source for ethnic demographic information would be national census reports. However, many national statistics bureaus have stopped reporting ethnicity in recent implementations of their census, possibly because of the sensitivity of the trait. Fortunately, the Afrobarometer stratifies their questioning starting with the subnational unit and works down with their random selection methods. Though the potential for error may increase the smaller the sampling unit becomes, regional ethnic makeup should be well represented by the Afrobarometer. Regional make-up was used for the combined dataset, while the individual nations will include a district-level variable because of the comparisons across SNU's which are conducted in the results and discussion sections. Attempting to use the same measure across the subnational units, a variable was created containing the following values: Not Dominant Ethnicity, No Dominant Ethnicity, and Dominant Ethnicity. Dominant here would be 50% or greater. The measure should calm any fears of inaccuracy within the survey and stays true to the dimension which is attempting to be analyzed. The discussion so far on ethnicity has been the role/position of power the individual's group has within the local and regional political environment.

Personal Characteristics. Personal characteristics are also included in the dataset in order to shore up the remaining variability of the individuals. Age, gender, and education are the remaining variables. As education and age increase the likelihood of the individual to participate in the public space also increases (Lambright, 2011). As explained by Wantchekon (2003), women are less likely in Benin to be lured by patronage and more by what candidates bring to the nation as a whole. Women more often talk to others in markets about problems and handle family problems which often involve public services (e.g. public schools, health clinics, household finances).

Public Relationships and Public Perceptions: *Authority.* Though all variables in the analysis deal with accountability to some degree, these three ask specifically who's responsible for making sure the officials, once elected, do their jobs (choices moving from central government to the citizenry). These are at the heart of accountability to the public. Additionally, the survey qualifies the question with "once elected," eliminating the option of simply voting an official out of office. For the public to hold these individuals to their commitments and obligations, citizens would need to stay engaged in the public space through participation in community decision-making by attending meetings and contacting public officials when they have issues. In regard to the problems which citizens have a direct experience, they are mostly summarized with those questions pertaining to public schools and public health clinics.

Corruption. In terms of the corruption index, the easiest assumption would be to only account for how corrupt citizens believe government officials to be. However, as Ekeh (1975) already argued, Africa's colonial institutional history makes it difficult for there to be assumptions made on how individuals may perceive corruption. Given the intensely nuanced past and present relationships, African nations and citizenries have with corruption, the study

will look at both perception of corruption and experience with corruption. For instance, “how many local government officials are corrupt” vs. “how often have you had to pay a bribe for X public service.” Including both perceptions and experience will cover any differences there may be between Western and sub-Saharan African definitions of corruption. Therefore, the variables accounting for acts qualifying as indications of corruption are included. For instance, “In the past year, how often, if ever, have you had to pay a bribe, give a gift, or do a favor to government officials in order to: [e.g. obtain a document, avoid a problem with police].” Considering both perceptions and actions will give a comprehensive picture of each citizen’s relationship with public corruption. The hypothesis regarding corruption does assume a void in battling corruption will result in breaks with constituents; however, based on the roles of the two publics, it is questionable whether the hypothesis will hold, as corruption could be good or bad for local populations.

Levels of corruption are some of the best indicators available into how well-equipped government institutions are in handling their duties and requirements. In the overall model, questions regarding the individual points of contact the citizens have with the government (actual and through the media) are believed to have a fairly equal distribution of associations across the factor. Citizens appear to have an overarching skepticism of the institutional validity of the government’s representation of the citizenry.

Fair Treatment. In order for localized decision-making to produce allocative and productive efficiency, local officials need the input/participation from all segments of the local population (Bardhan, 2002: cited in Kimr, 2008). Though the government may put in place requirements for the representation of disenfranchised populations, if citizens do not feel they are treated equally by the government, they are less likely to interact with the government. The lack

of perceived equality can be caused by the individual being a part of a powerless minority group or a general sense of a lack of justice in the public sector.

Confidence. This refers to the understanding between the individual citizens and their public officials that said officials have the best interest of the public as their intent in their duties. As seen in the US examples and the Friedrich/Finer debates (Rivlin, 1971; Kaufman 1969; Friedrich, 1940; Finer, 1941), confidence is crucial for there to be a productive relationship between local government and the public and a promotion of development in a democracy. The role of confidence is heightened even more with the coming of decentralization into policy in the 1980s (Dauda, 2006). The stronger the bond between public officials and their citizenry, the more likely the citizenry is to participate in the public space to help solve local problems. Here, the confidence factor will most likely include those variables addressing trust and the willingness of public officials to listen to the citizenry.

Approval. With approval, several areas of public service were covered for two to three levels of government. For instance, road maintenance may not be the most interesting public service, but it is crucial in a voter-based developing system. Poor roads and bridges can reduce the flow of goods to markets and make a 10 kilometer drive a 90minute endeavor, based on personal experience. All questions, ranging from expense to lack of capacity to strains on infrastructure, are believed to have large correlations in their respective factors.

All Nations' Expectations

Driving up participation at the local levels has been a major focus of the development literature as the strategy of moving decisions closer to the people to increase effectiveness and efficiency is dependent on the input of the people's willingness to participate. Several actions by the citizenry can be considered a form of participation and have been addressed above by authors such as Campbell and Marshall (2011). In attempting to understand what drives participation at the local level, this study combines the viewpoint that institutions matter (Arnstein, 1969) and citizens' individual perceptions and traits matter (Swapan, 2016). The above literature review intended to describe all the variables needed to create a comprehensive model for what motivates citizens to participate at the local level.

The attitudes and individual characteristics of citizens and their impact on participation at the local level forms the other half of the participation model, as described by Swapan (2016). Each potential variable relating to relationships and perceptions of local government and the citizens own traits can be defended within the broader model and through the specific sub-set of literature. For instance, "Fiscal Power" is directly addressed in Moehler's model through his variable of "Poverty," but additionally has its own relevant defense in this study's model through research done by authors such as Gibson (2005) and Giraudy (2010). The remaining chapters of this study will investigate the results, and what they may mean for participation. Stated in their Round 5 survey, the Afrobarometer's goal is the "Quality of Democracy and Governance" in the respected nations covered. As such, a number of the questions contained in the survey address directly or indirectly these dimensions of the model. The questions which the study believes are contained in each factor variable are found below.

Table 14

| Participation Factor | |
|--|------|
| Member of Community Group | Q25B |
| Member of Religious Group | Q25A |
| Join others to raise an issue | Q26B |
| Attend a Community Meeting | Q26A |
| Discuss Politics with Friends | Q15 |
| Contact LG officials | Q30A |
| Contact MP | Q30B |
| Contact Government Agency | Q30C |
| Contact Political Party official | Q30D |
| Voted in National Election | Q27 |
| Persuade Others for a Candidate or Party: Nat'l Election | Q29B |
| Work During Nat'l Election | Q29C |
| Attend a Nat'l Campaign Event | Q29A |
| Attend Protest | Q26D |
| Used Force or Violence | Q26E |
| Refuse to Pay Tax | Q26C |

| Decentralization Variables | |
|----------------------------|--|
| Fiscal | % of Revenue from Local Source (accountability to voters) |
| Political | % of Voter Turnout |
| | SNU Ethnic Dominance |
| | Z-Score of Population/Landmass |

Table 15

| Individual Characteristics Factors | | | |
|------------------------------------|--|-----------------|--|
| Personal Financial Involvement | Payment: GST | Financial Power | Country's present economic condition |
| | Payment: Licence to LG | | Your present living conditions |
| | Payment: Property Tax | | Your living conditions vs. others |
| | Payments made: income taxes | | Country's economic condition compared to 12 months ago |
| | Payments required: self-employer taxes | | Your living conditions compared to 12 months ago |
| | Difficulty to find out what taxes or fees to pay | | Country's economic condition in 12 months time |
| | Difficulty to find out how gov't uses the revenues | | Your living conditions in 12 months time |
| | Difficulty to avoid paying taxes | | The overall direction of the country |
| | Right or wrong: not paying for the gov't services | Ethnicity | Ethnic group |
| | Right or wrong: not paying the taxes | | Ethnic group% of Region |
| Traits | Gender | | Ethnic group vs. District Majority |
| | Level of Education | | |
| | Age | | |
| Politics | Citizen's political party affiliation | | |
| | Party compared to central government's political party | | |
| | Party compared to party dominating subnational unit | | |

Table 16

| Perceptions, Experiences, and Relationships Factors | | | |
|---|---|------------------------|--|
| Authority (Capacity and Accountability) | Problem: Too Expensive | Fair Treatment | How often people treated unequally |
| | Problem: Lack of Supplies | | How often women treated unequally by traditional leaders |
| | Problem: Poor Teaching | | How often women treated unequally by police and courts |
| | Problem: Absent Teachers | | How often women treated unequally by employers |
| | Problem: Overcrowded | | How often officials unpunished |
| | Problem: Poor Facilities | | How often ordinary people unpunished |
| | Problem: Too Expensive | | How often obtain household services without paying |
| | Problem: Lack of Supplies | | How often avoid paying taxes |
| | Problem: Lack of Attention | Corruption and Bribery | Corruption: President |
| | Problem: Absent Doctors | | Corruption: MP |
| | Problem: Long Waits | | Corruption: Govt Officials |
| | Problem: Dirty Facilities | | Corruption: LGC |
| | Responsible: MPs | | Corruption: Police |
| | Responsible: LGCs | | Corruption: Tax Officials |
| | Responsible: President | | Corruption: Judges |
| | Govt Handles Economy | | Bribe: Permits |
| Approval | Govt-Living Standards of Poor | | Bribe: Water/Sanitation |
| | Govt-Creating Jobs | | Bribe: Local Health Clinic |
| | Govt-Keeps Prices Down | | Bribe: Police |
| | Govt- Narrowing Income Gap | | Bribe: School |
| | Govt-Reducing Crime | | Bribe: Nat'l Election |
| | Govt-Basic Health Services | Confidence | Trust-President |
| | Govt-Educational Needs | | Trust-Parliament |
| | Govt-Water/Sanitation | | Trust-National Election Cmte |
| | Govt-Enough to Eat | | Trust-Tax Department |
| | Govt-Fighting Corruption | | Trust- Local Government Council |
| | Govt-Resolving Violence between Communities | | Trust-Ruling Party |
| | Govt-Combating HIV/AIDS | | Trust-Opposition Parties |
| | Govt-Roads and Bridges | | Trust-Police |
| | Govt-Electric Supply | | Trust-Courts |
| | Govt-Empowering Women | | Performance- President |
| | Local Govt-Maintain Roads | | Performance- MP |
| | Local Govt-Local Markets | | Performance- Local Government Officials |
| | Local Govt-Health Standards in Restaurants | | MPs Listen |
| | Local Govt-Community Clean | | LGCs Listen |
| | Local Govt-Use of Land | | |

The study believes the above variables to be significant in the respective factors based on the conclusions found in past research and literature. Additionally, due to different national level influences, the study expects there to be a variance between countries regarding which variables are found to be significant in each factor. Therefore, the report makes a point to explain expectations for the countries of Uganda, Ghana, and Tanzania.

Uganda's Expectations

Based upon the above assessment of Uganda's central and local government circumstances, several expectations can be stated for how the factors of the model will load. For instance, given the lack of qualified staff to fill the majority of local government positions and the unwillingness by the central government to build these institutions, the citizenry will probably find several problems with the public services. This would also be in line with the low level of fiscal decentralization and revenue freedoms granted to the local levels. Additionally, the approval of the local government's actions will probably have lower correlations, if perceptions are in line with the reality on the ground. However, the mere closeness of elected officials (figurative and literally), may have an unexpected effect and increase their approval or decrease it because local failures are more obvious. Despite the high levels of corruption at the central level, the poor financial support for local government leading to officials to find other resource streams (bribes), coupled with the frequent interaction between citizen's and local officials/services, suggests that citizens will see more corruption in local officials than other government officials.

Most importantly, the associations for participation should find more weight on those variables relating to civil and religious organizations and political party officials rather than the locally elected officials. This is supported by Brett's 1994 assertion of the role of grassroots' organization in past instances of insufficient government capacity at the local level in Uganda. The past heated tensions regarding the existence of political parties and the purely political reasoning behind the creation of new subnational governments suggest a strong role for the political party representatives in districts, rather than citizens going strictly to their elected

representatives (Green, 2010). Additionally, the ethnic exploitation by politicians in the past should reemphasize the role of politics in citizens' everyday lives.

Table 17

| UGANDA | | | | | | | | | |
|---|------|---|---|------|---|--|------|---|--|
| PARTICIPATION | | | CONFIDENCE | | | FAIR TREATMENT | | | |
| Member of Community Group | Q25B | X | Trust-President | Q59A | X | How often people treated unequally | Q56B | | |
| Member of Religious Group | Q25A | X | Trust-Parliament | Q59B | X | How often women treated unequally by traditional leaders | Q56C | | |
| Join others to raise an issue | Q26B | X | Trust-National Election Cmte | Q59C | X | How often women treated unequally by police and courts | Q56D | | |
| Attend a Community Meeting | Q26A | X | Trust-Tax Department | Q59D | | How often women treated unequally by employers | Q56E | | |
| Discuss Politics with Friends | Q15 | X | Trust- Local Government Council | Q59E | | How often officials unpunished | Q56F | X | |
| Contact LG officials | Q30A | | Trust-Ruling Party | Q59F | X | How often ordinary people unpunished | Q56G | | |
| Contact MP | Q30B | | Trust-Opposition Parties | Q59G | | How often obtain household services without paying | Q56H | X | |
| Contact Government Agency | Q30C | | Trust-Police | Q59H | | How often avoid paying taxes | Q56I | X | |
| Contact Political Party official | Q30D | X | Trust-Courts | Q59J | | APPROVAL | | | |
| Voted in National Election | Q27 | | Performance- President | Q71A | X | Govt Handles Economy | Q65A | X | |
| Persuade Others for a Candidate or Party: National Election | Q29B | | Performance- MP | Q71B | X | Govt-Living Standards of Poor | Q65B | X | |
| Work During Nat'l Election | Q29C | | Performance- Local Government Officials | Q71C | | Govt-Creating Jobs | Q65C | X | |
| Attend a Nat'l Campaign Event | Q29A | | MPs Listen | Q62A | X | Govt-Keeps Prices Down | Q65D | X | |
| Attend Protest | Q26D | | LGCs Listen | Q62B | | Govt- Narrowing Income Gap | Q65E | X | |
| Used Force or Violence | Q26E | | AUTHORITY | | | Govt-Reducing Crime | Q65F | X | |
| Refuse to Pay Tax | Q26C | | Problem: Too Expensive | Q68A | X | Govt-Basic Health Services | Q65G | X | |
| CORRUPTION | | | Problem: Lack of Supplies | Q68B | X | Govt-Educational Needs | Q65H | X | |
| Corruption: President | Q60A | | Problem: Poor Teaching | Q68C | | Govt-Water/Sanitation | Q65I | X | |
| Corruption: MP | Q60B | | Problem: Absent Teachers | Q68D | X | Govt-Enough to Eat | Q65J | X | |
| Corruption: Govt Officials | Q60C | | Problem: Overcrowded | Q68E | X | Govt-Fighting Corruption | Q65K | X | |
| Corruption: LGC | Q60D | X | Problem: Poor Facilities | Q68F | X | Govt-Resolving Violence between Communities | Q65L | X | |
| Corruption: Police | Q60E | X | Problem: Too Expensive | Q69A | X | Govt-Combating HIV/AIDS | Q65M | X | |
| Corruption: Tax Officials | Q60F | | Problem: Lack of Supplies | Q69B | X | Govt-Roads and Bridges | Q65N | X | |
| Corruption: Judges | Q60G | | Problem: Lack of Attention | Q69C | | Govt-Electric Supply | Q65O | X | |
| Bribe: Permits | Q61A | X | Problem: Absent Doctors | Q69D | X | Govt-Empowering Women | Q65P | X | |
| Bribe: Water/Sanitation | Q61B | X | Problem: Long Waits | Q69E | X | Local Govt-Maintain Roads | Q66A | | |
| Bribe: Local Health Clinic | Q61C | X | Problem: Dirty Facilities | Q69F | X | Local Govt-Local Markets | Q66B | | |
| Bribe: Police | Q61D | X | Responsible: MPs | Q72A | X | Local Govt-Health Standards in Restaurants | Q66C | | |
| Bribe: School | Q61E | X | Responsible: LGCs | Q72B | | Local Govt-Community Clean | Q66D | | |
| Bribe: Nat'l Election | Q61F | | Responsible: President | Q72C | | Local Govt-Use of Land | Q66E | | |

Ghana's Expectations

The general stability of Ghana since the Rawlings administration suggests a number of factor correlations weighing heavily and not so heavily on variables. Ghana has experienced two peaceful transitions of power at the national level would lead experts to the conclusion that the political environment is stable enough for sufficient and sustainable development with strong local input with little political strife as hindrances. Citizens should have more confidence in at least the national government and see them as less corrupt (Huntington, 1991; Bratton, 2013). However, the winner takes all structure, coupled with the patronage system still in place, suggests politics still having some importance in participation, accountability, confidence, and corruption; though to a lesser degree than the other nations. As mentioned in the case study, the roles and responsibilities of local officials are still highly constrained directly by the central government in dictating their obligations to the capital and their citizens and indirectly by central government by RCCs. However, these constraints may not seriously impact levels of confidence, approval, and accountability, if those centrally appointed officials at regional levels can still take in local input and direct local officials to action. Unfortunately, local officials appear to receive little support from central government for local level decision making (Olowu and Wunsch, 2004), which suggests approval, accountability, and confidence are affected by the local government officials.

On issues regarding equality, the factor may be influenced by the above discussion of local government power, but the study can also look at representation in the government system to gain a broad understanding of how less-powerful populations are treated and from there, how citizens perceive the treatment. Women, making up roughly 50% of the citizenry's population, should be a good indicator for the general population. In Ghana, the central government reserves

15% of assembly seats for women, which are appointed by the central government and not elected by the citizenry. However, the percentage is closer to 11% (CLGF, 2018). Therefore, it seems likely the citizenry will not see the government of either level treating women fairly.

in regard to participation, authors, such as Inkoom (2011), have highlighted the lack of community organizations at the local level encouraging more citizens in the political public space. This observation should reduce any potential weight those variables relating to local organizations or group action in the participation factor will have. Additionally, though Ghana still holds a strong patronage system in place, the peaceful transitions of power may suggest that government officials (local and central) may have a stable power outlet for change, and thus, have more contact by citizens. Though 15% on average for own revenue for local government may be low for western nations, given the poor status of fiscal decentralization in Sub-Saharan Africa, this share of revenue implies a higher level of participation at the local level by the citizenry toward the local officials. Given the politics and low civil society, the comparably higher own revenue suggests higher participation in the form of contacting local government officials.

Table 18

| GHANA | | | | | | | |
|---|------|---|---|------|---|--|--------|
| PARTICIPATION | | | CONFIDENCE | | | FAIR TREATMENT | |
| Member of Community Group | Q25B | | Trust-President | Q59A | X | How often people treated unequally | Q56B X |
| Member of Religious Group | Q25A | | Trust-Parliament | Q59B | X | How often women treated unequally by traditional leaders | Q56C X |
| Join others to raise an issue | Q26B | | Trust-National Election Cmte | Q59C | | How often women treated unequally by police and courts | Q56D X |
| Attend a Community Meeting | Q26A | | Trust-Tax Department | Q59D | | How often women treated unequally by employers | Q56E X |
| Discuss Politics with Friends | Q15 | | Trust- Local Government Council | Q59E | X | How often officials unpunished | Q56F X |
| Contact LG officials | Q30A | X | Trust-Ruling Party | Q59F | X | How often ordinary people unpunished | Q56G |
| Contact MP | Q30B | X | Trust-Opposition Parties | Q59G | | How often obtain household services without paying | Q56H X |
| Contact Government Agency | Q30C | X | Trust-Police | Q59H | | How often avoid paying taxes | Q56I X |
| Contact Political Party official | Q30D | X | Trust-Courts | Q59J | | APPROVAL | |
| Voted in National Election | Q27 | | Performance- President | Q71A | X | Govt Handles Economy | Q65A X |
| Persuade Others for a Candidate or Party: National Election | Q29B | X | Performance- MP | Q71B | X | Govt-Living Standards of Poor | Q65B X |
| Work During Nat'l Election | Q29C | X | Performance- Local Government Officials | Q71C | X | Govt-Creating Jobs | Q65C X |
| Attend a Nat'l Campaign Event | Q29A | X | MPs Listen | Q62A | X | Govt-Keeps Prices Down | Q65D X |
| Attend Protest | Q26D | | LGCs Listen | Q62B | X | Govt- Narrowing Income Gap | Q65E X |
| Used Force or Violence | Q26E | | AUTHORITY | | | Govt-Reducing Crime | Q65F X |
| Refuse to Pay Tax | Q26C | | Problem: Too Expensive | Q68A | X | Govt-Basic Health Services | Q65G X |
| CORRUPTION | | | Problem: Lack of Supplies | Q68B | X | Govt-Educational Needs | Q65H X |
| Corruption: President | Q60A | X | Problem: Poor Teaching | Q68C | | Govt-Water/Sanitation | Q65I X |
| Corruption: MP | Q60B | X | Problem: Absent Teachers | Q68D | X | Govt-Enough to Eat | Q65J X |
| Corruption: Govt Officials | Q60C | X | Problem: Overcrowded | Q68E | X | Govt-Fighting Corruption | Q65K X |
| Corruption: LGC | Q60D | | Problem: Poor Facilities | Q68F | X | Govt-Resolving Violence between Communities | Q65L X |
| Corruption: Police | Q60E | | Problem: Too Expensive | Q69A | X | Govt-Combating HIV/AIDS | Q65M X |
| Corruption: Tax Officials | Q60F | | Problem: Lack of Supplies | Q69B | X | Govt-Roads and Bridges | Q65N X |
| Corruption: Judges | Q60G | X | Problem: Lack of Attention | Q69C | | Govt-Electric Supply | Q65O X |
| Bribe: Permits | Q61A | | Problem: Absent Doctors | Q69D | X | Govt-Empowering Women | Q65P X |
| Bribe: Water/Sanitation | Q61B | | Problem: Long Waits | Q69E | X | Local Govt-Maintain Roads | Q66A X |
| Bribe: Local Health Clinic | Q61C | | Problem: Dirty Facilities | Q69F | X | Local Govt-Local Markets | Q66B X |
| Bribe: Police | Q61D | | Responsible: MPs | Q72A | X | Local Govt-Health Standards in Restaurants | Q66C X |
| Bribe: School | Q61E | | Responsible: LGCs | Q72B | X | Local Govt-Community Clean | Q66D X |
| Bribe: Nat'l Election | Q61F | | Responsible: President | Q72C | X | Local Govt-Use of Land | Q66E X |

Tanzania's Expectations

Tanzania's long history with socialist nationalism will likely still hold some lasting impact on the views and relationships of the local citizenry. The study should expect factors to load more around those variables focused on community action and less around local government. Additionally, the central government has maintained strict control over development at all levels including the budgeting for local governments, intensifying the importance of this level of government in the factor loadings. It should be noted that the government and the CCM (previously TANU) political party have been and still are synonymous with one another for 63 continuous years. With such an ingrained political party in the governmental and social institutions and everyday life, political parties and their representatives should also be found with higher correlations with these positive factors.

Though not addressed directly in the factor analysis, the ethnic dominance of one tribe over another in an area should not be found to negatively impact participation or views on local and central government in the case of Tanzania. This is supported by the communal past of the nation and the current demographic make-up of the country. The nation is highly fractionalized with 133 tribes, which means that no individual ethnic group being able to hold enough fiscal or political power to dominate either realm of the nation. There is so much ethnic fragmentation, that ethnic fragmentation does not matter. This is one reason why the CCM has been able to dominate nationally rather than leaning on a regional constituency consisting primarily of one ethnicity.

Corruption on all levels should be loaded relatively high based on the socialist history, if similar to other nations with similar pasts, and the influx of mining and natural resource revenue to the governmental system. The corruption environment in government along with the low fiscal

budgeting opportunities of local government and the high-level of decision-making control maintained at the central government suggests corruption is perceived to be higher at the local level along with accountability, approval, and confidence being lower.

The high level of communal history in Tanzania, coupled with the lack of a defined civil society, low ethnic conflict, and small amounts of locally generated revenue, suggests that the variables with high correlations in the participation factor are those focused around the community but not civil society. Community action without formal structure is the likely form participation will have with the community directly contacting officials who are MPs and political party representatives.

Table 19

| TANZANIA | | | | | | | |
|---|--------|---|--------|--|------|---|--|
| PARTICIPATION | | CONFIDENCE | | FAIR TREATMENT | | | |
| Member of Community Group | Q25B | Trust-President | Q59A X | How often people treated unequally | Q56B | | |
| Member of Religious Group | Q25A | Trust-Parliament | Q59B X | How often women treated unequally by traditional leaders | Q56C | | |
| Join others to raise an issue | Q26B X | Trust-National Election Cmte | Q59C | How often women treated unequally by police and courts | Q56D | | |
| Attend a Community Meeting | Q26A X | Trust-Tax Department | Q59D | How often women treated unequally by employers | Q56E | | |
| Discuss Politics with Friends | Q15 X | Trust- Local Government Council | Q59E | How often officials unpunished | Q56F | X | |
| Contact LG officials | Q30A | Trust-Ruling Party | Q59F X | How often ordinary people unpunished | Q56G | X | |
| Contact MP | Q30B X | Trust-Opposition Parties | Q59G | How often obtain household services without paying | Q56H | X | |
| Contact Government Agency | Q30C | Trust-Police | Q59H | How often avoid paying taxes | Q56I | X | |
| Contact Political Party official | Q30D X | Trust-Courts | Q59J | APPROVAL | | | |
| Voted in National Election | Q27 | Performance- President | Q71A X | Govt Handles Economy | Q65A | X | |
| Persuade Others for a Candidate or Party: National Election | Q29B X | Performance- MP | Q71B X | Govt-Living Standards of Poor | Q65B | X | |
| Work During Nat'l Election | Q29C X | Performance- Local Government Officials | Q71C | Govt-Creating Jobs | Q65C | X | |
| Attend a Nat'l Campaign Event | Q29A X | MPs Listen | Q62A X | Govt-Keeps Prices Down | Q65D | X | |
| Attend Protest | Q26D | LGCs Listen | Q62B | Govt- Narrowing Income Gap | Q65E | X | |
| Used Force or Violence | Q26E | AUTHORITY | | Govt-Reducing Crime | Q65F | X | |
| Refuse to Pay Tax | Q26C | Problem: Too Expensive | Q68A X | Govt-Basic Health Services | Q65G | X | |
| CORRUPTION | | Problem: Lack of Supplies | Q68B X | Govt-Educational Needs | Q65H | X | |
| Corruption: President | Q60A | Problem: Poor Teaching | Q68C X | Govt-Water/Sanitation | Q65I | X | |
| Corruption: MP | Q60B | Problem: Absent Teachers | Q68D X | Govt-Enough to Eat | Q65J | X | |
| Corruption: Govt Officials | Q60C | Problem: Overcrowded | Q68E X | Govt-Fighting Corruption | Q65K | X | |
| Corruption: LGC | Q60D X | Problem: Poor Facilities | Q68F X | Govt-Resolving Violence between Communities | Q65L | X | |
| Corruption: Police | Q60E X | Problem: Too Expensive | Q69A X | Govt-Combating HIV/AIDS | Q65M | X | |
| Corruption: Tax Officials | Q60F X | Problem: Lack of Supplies | Q69B X | Govt-Roads and Bridges | Q65N | X | |
| Corruption: Judges | Q60G X | Problem: Lack of Attention | Q69C X | Govt-Electric Supply | Q65O | X | |
| Bribe: Permits | Q61A X | Problem: Absent Doctors | Q69D X | Govt-Empowering Women | Q65P | X | |
| Bribe: Water/Sanitation | Q61B X | Problem: Long Waits | Q69E X | Local Govt-Maintain Roads | Q66A | | |
| Bribe: Local Health Clinic | Q61C X | Problem: Dirty Facilities | Q69F X | Local Govt-Local Markets | Q66B | | |
| Bribe: Police | Q61D X | Responsible: MPs | Q72A X | Local Govt-Health Standards in Restaurants | Q66C | | |
| Bribe: School | Q61E X | Responsible: LGCs | Q72B | Local Govt-Community Clean | Q66D | | |
| Bribe: Nat'l Election | Q61F | Responsible: President | Q72C X | Local Govt-Use of Land | Q66E | | |

Chapter 4: Results and Discussion

Factor Results and Discussion

The relevant results are found below. From here, the study conducts a national-level analysis on how perceptions, experience, and personal characteristics can influence choices in how to participate. It is important to note that if participation does not appear to have a significant relationship with the other dimensions once the research performs the regressions, there are additional steps which can be taken to better understand the results. For instance, participation could be a factor associated with satisfaction of government. This causal relationship could be confirmed through a two-stage model by first looking at experience, perceptions, and individual characteristics' impact on satisfaction and then include the participation factor. This would be performed once the three hypotheses are addressed.

In each section below, the results of the factor analysis from each nation and the collective are summarized in the respective tables and analyzed, respectively. When variables unexpectedly share communality with those intended to be within a factor, they were included at the bottom of their section and addressed in the assessments. Once we understand the latent variables and the observed variables with communal variance constructing these latent variables, we then use these constructs in OLS regressions to examine their relationships with the participation construct.

All Nations

The participation dimension correlated as predicted. Interestingly, acts of inclusion, but not civil society, had the greatest common variance in the participation construct. This result is in line with balancing the participation typology established by Campbell and Marshall (2000) and the potential limitation of civil society discussed in the literature review. Slightly unexpected is

the grouping of political participation next in the dimension. The correlations suggest political parties are ingrained in the public space, which is in line with the history of several of the nations. For example, as recently as 2007, the political fallout in Kenya after the Presidential elections resulted in nationwide bloodshed, indicating the passion for politics and the underlying political instability even in a nation thought to be peaceful and far along in the development process. Additionally, the weak correlation on the community and, more prominently, religious organizations is indicative of participation on the whole of these nations not being well-developed. As previously discussed, civil society and the organizations which form it are a complex and intricate web of interests and formal infrastructures. Correlated more strongly on informal group action suggests this set of nations are still not far along in the growth of participation outlets.

The dimension enveloping fair treatment of citizens by government officials resulted in all the expected questions correlate significantly, along with several others which suggest a general lack of stability in the nations' political and social institutions. Not only does the citizenry believe ordinary citizens, along with women in particular, and officials are treated unequally, but they also perceive national politicians to treat each other and the institutions they represent unfairly. These correlations are indicative of an unstable political and governmental environment generally across all nine nations. The cynical views could be influenced by the recent turmoil found in several the nations. Not only has Kenya experienced political violence, but Mali has also experienced massive conflict in its North just nine months after the survey was conducted.

Within the correlation for confidence, questions regarding trust loaded across all elected and bureaucratic administrators. However, only the President's performance loaded significantly,

while Members of Parliament and Local Government Officials were only not significant. These results may be indicative of the strength found in the executive branch in Sub-Saharan Africa, along with the media attention given to the head of state in each country. Interestingly, but in line with the performance correlations, listening by Members of Parliament and Local Government Officials did not correlate anywhere in the confidence dimension or in the model. Of note, the authority and corruption dimensions did load as predicted for the set of nations. If the respondent perceived one official as corrupt, they were likely to feel the same about the others. This is the same for having to pay a bribe for a public service. Additionally, problems with public services correlated variance, as did who is responsible to making sure officials at different levels do their jobs. Based on this baseline for the dimensions the study will go forward in examining Uganda, Ghana, and Tanzania's results.

| Table 20: ALL NATIONS | | | | | | | | | | | |
|---|------|------|---|------|------|--|------|------|--|--|--|
| PARTICIPATION | | | CONFIDENCE | | | FAIR TREATMENT | | | | | |
| Member of Community Group | Q25B | 2.90 | Trust-President | Q59A | 4.21 | How often people treated unequally | Q56B | 3.18 | | | |
| Member of Religious Group | Q25A | 1.99 | Trust-Parliament | Q59B | 3.54 | How often women treated unequally by traditional leaders | Q56C | 5.26 | | | |
| Join others to raise an issue | Q26B | 3.69 | Trust-National Election Cmte | Q59C | 4.41 | How often women treated unequally by police and courts | Q56D | 6.05 | | | |
| Attend a Community Meeting | Q26A | 4.14 | Trust-Tax Department | Q59D | 3.29 | How often women treated unequally by employers | Q56E | 5.75 | | | |
| Discuss Politics with Friends | Q15 | 3.13 | Trust- Local Government Council | Q59E | 3.41 | How often officials unpunished | Q56F | 3.44 | | | |
| Contact LG officials | Q30A | 2.49 | Trust-Ruling Party | Q59F | 4.63 | How often ordinary people unpunished | Q56G | 2.73 | | | |
| Contact MP | Q30B | 2.27 | Trust-Opposition Parties | Q59G | 0.37 | How often obtain household services without paying | Q56H | 2.89 | | | |
| Contact Government Agency | Q30C | 1.82 | Trust-Police | Q59H | 3.92 | How often avoid paying taxes | Q56I | 2.62 | | | |
| Contact Political Party official | Q30D | 2.28 | Trust-Courts | Q59J | 2.96 | How often party competition leads to conflict | Q52B | 2.64 | | | |
| Voted in National Election | Q27 | 1.07 | Performance- President | Q71A | 2.03 | How often president ignores laws | Q52C | 3.95 | | | |
| Persuade Others for a Candidate or Party: National Election | Q29B | 3.32 | Performance- MP | Q71B | 0.97 | How often opposition parties silenced by government | Q52D | 4.67 | | | |
| Work During Nat'l Election | Q29C | 3.52 | Performance- Local Government Officials | Q71C | 0.81 | How often president ignore parliament | Q52E | 3.45 | | | |
| Attend a Nat'l Campaign Event | Q29A | 3.06 | MPs Listen | Q62A | 0.71 | APPROVAL | | | | | |
| Attend Protest | Q26D | 1.79 | LGCs Listen | Q62B | 1.07 | Govt Handles Economy | Q65A | 0.92 | | | |
| Used Force or Violence | Q26E | 1.33 | AUTHORITY | | | Govt-Living Standards of Poor | Q65B | 1.47 | | | |
| Refuse to Pay Tax | Q26C | 0.99 | School Problem: Too Expensive | Q68A | 2.51 | Govt-Creating Jobs | Q65C | 1.64 | | | |
| Close to political party | Q89A | 2.29 | School Problem: Lack of Supplies | Q68B | 2.60 | Govt-Keeps Prices Down | Q65D | 0.69 | | | |
| Interest in Public Affairs | Q14 | 2.28 | School Problem: Poor Teaching | Q68C | 3.42 | Govt- Narrowing Income Gap | Q65E | 0.98 | | | |
| CORRUPTION | | | School Problem: Absent Teachers | Q68D | 3.50 | Govt-Reducing Crime | Q65F | 2.60 | | | |
| Corruption: President | Q60A | 3.26 | School Problem: Overcrowded | Q68E | 3.71 | Govt-Basic Health Services | Q65G | 3.77 | | | |
| Corruption: MP | Q60B | 4.75 | School Problem: Poor Facilities | Q68F | 3.58 | Govt-Educational Needs | Q65H | 3.44 | | | |
| Corruption: Govt Officials | Q60C | 4.57 | Clinic Problem: Too Expensive | Q69A | 2.99 | Govt-Water/Sanitation | Q65I | 2.71 | | | |
| Corruption: LGC | Q60D | 4.23 | Problem: Lack of Supplies | Q69B | 4.14 | Govt-Enough to Eat | Q65J | 2.14 | | | |
| Corruption: Police | Q60E | 3.26 | Problem: Lack of Attention | Q69C | 4.57 | Govt-Fighting Corruption | Q65K | 2.57 | | | |
| Corruption: Tax Officials | Q60F | 4.71 | Problem: Absent Doctors | Q69D | 4.11 | Govt-Resolving Violence between Communities | Q65L | 2.92 | | | |
| Corruption: Judges | Q60G | 4.58 | Problem: Long Waits | Q69E | 4.10 | Govt-Combating HIV/AIDS | Q65M | 2.72 | | | |
| Bribe: Permits | Q61A | 4.35 | Problem: Dirty Facilities | Q69F | 3.28 | Govt-Roads and Bridges | Q65N | 3.19 | | | |
| Bribe: Water/Sanitation | Q61B | 4.96 | Responsible: MPs | Q72A | 5.88 | Govt-Electric Supply | Q65O | 2.98 | | | |
| Bribe: Local Health Clinic | Q61C | 4.55 | Responsible: LGCs | Q72B | 5.42 | Govt-Empowering Women | Q65P | 3.04 | | | |
| Bribe: Police | Q61D | 4.19 | Responsible: President | Q72C | 3.84 | Local Govt-Maintain Roads | Q66A | 2.57 | | | |
| Bribe: School | Q61E | 4.46 | Contact Government Agency | Q30C | 2.28 | Local Govt-Local Markets | Q66B | 2.42 | | | |
| Bribe: Nat'l Election | Q61F | 2.82 | Contact LG officials | Q30A | 2.14 | Local Govt-Health Standards in Restaurants | Q66C | 2.87 | | | |
| Used Force or Violence | Q26E | 2.06 | | | | Local Govt-Community Clean | Q66D | 2.99 | | | |
| | | | | | | Local Govt-Use of Land | Q66E | 2.55 | | | |
| | | | | | | Performance- President | Q71A | 1.77 | | | |

Uganda

In the Uganda case, the research found the variables focused on to whom a government representative is responsible for their actions were correlated into their own factor, but still maintains the accountability aspect of authority. This is not unexpected, and not out of the realm of possibility, clearly. As one would expect in more localized policy making, the associations was lowest with the President, middle for Members of Parliament, and highest for local officials. As the questions moved closer to the local level, respondents saw more of the responsibility on the population to make sure jobs are done correctly and less on superior levels of government. This falls in line with the high level of political decentralization identified in Uganda's 107 districts.

Of the other variables, the dominant correlations fell on those inquiries focused on expression of political opinion. These questions deal with freedom to say what you think, join political organizations, and choose who to vote for freely. The correlations are as expected given the history of political organization in Uganda. The nation endured the dictatorship of Idi Amin for eight years and then capital turmoil resulting in a bush war between Milton Obote and Yoweri Museveni. The latter obtained control in 1986 and led a "non-party" movement. The first opportunity to reinstate political parties occurred in the 2000 and resulted in over 90% wishing to remain non-partisan. In just five years' time, those numbers flipped in favor of bringing back political parties through a constitutional referendum. Since the Museveni took power, the government has meticulously calculated the importance of political association, ethnicity, and districting. In what became known as "districtization." Subnational governments expanded in number from 80 to 107. Elliot Green (2010) found that the goal had little to do with poverty eradication and ethnic minority empowerment touted by the central power, and instead, primarily

for political gain by dividing opposition support, similar to gerrymandering in South Africa, but with the creation of new government bureaucracies rather than reshaping boundaries. Political positioning in the government structure and citizen support for the controlling party is why the National Resistance Movement (NRM) has remained in power for 30 years.

Financial Involvement factor also offers a contrarian position to the previously discussed grouping of to whom public officials are responsible. If an individual has little understanding of the public service system, it goes to reason they will not have the knowledge to hold the public agents accountable. Additionally, and to a larger degree, variables loaded within a factor that is at the center of financial involvement. Questions pertaining to the taxes which individuals are meant to contribute had complimentary correlations to those focused on whether it is acceptable and understandable for someone to curb their financial responsibilities to the government sector. This falls in line with the public finance literature which explains that if citizens are more financially invested in government, they are more involved in the public sector's stability and how the government determines its financial priorities.

Corruption, interestingly, the largest associations fell on the Tax Officials and those who are local and elected, MPs and Local Government Councilors. Once again, the President is seen in a more positive view and does not load in the corruption factor. Judges and the general "Government Official" had a lower correlation with perceived corruption, while police did not originally associate. Intriguingly, the variable in this grouping which loaded least, was whether the citizen received a bribe/payment by a party member to vote a particular way in the most recent national election. Attempting to better understand these results, the study looked at the basic tabulation for the variable around bribery. While the bulk of the variables had a clear majority of respondents stating they at the least have not had experience in the past year (or

Never), the vote buying variable's responses are better dispersed with few saying they have no experience in the past year. "Never" still represents most the respondents, but the remaining fall among the affirmative options. Interestingly, experiencing bribery with police loaded heavily compared to perceived corruption. This result suggests the population accepts bribing police as a normal and accepted occurrence. Based on first-hand experience, police are viewed by the population as under-funded and require additional funds if a citizen wishes an officer to travel or have any expenses related to one's case or complaint. The low central government support for local police and the researcher's personal understanding of these payments to police, suggest the bribes are needed for the police to have the fiscal means to handle basic functions. For instance, police will need transport if the location where a crime was committed is far away and they may request the citizen filing the complaint to provide those finances, as they do not have those means. Remarkably, though the questions qualify a one-year time period, the election cycle is drastically smaller, meaning each attempt at bribery is more significant.

The only variable which did not share communal variance with the other questions in the Authority construct was the expensiveness of school. This should have been expected as primary school in Uganda is universal and free. Interestingly, when broken down by gender, males and females are relatively close in their distribution among these public service issues. Authors, such as Wantchekon, have suggested that women are more focused on issues around their communities. Wantchekon made this observation in his natural experiment in Benin where he found women are less susceptible to patronage and are better focused on policies. As women have more day to day dealing with public services, they are predicted to point out further problems and see these problems as important. Additionally, these variables appear to have quite

low communality with the rest of the model, suggesting their importance in explaining the variance in the design is high.

The most crucial factor(s) to this research is likely the one representing participation in the public space. Interestingly, the participation construct for the Uganda caseloads most heavily on citizens joining a group or attending an event in a group setting than contacting government officials as an individual. In addition to variables pertaining to participation in a nonpartisan public space, involvement in political parties loaded heavily with this factor, like with the confidence factor. Questions grouped around whether a citizen has contacted a particular public official about a problem had one of the highest correlations for political party leaders. The results agree with the expectations of citizens participating more through group action than individually relying on contact with government officials (local and political). Based on past experience with local populations in Uganda, when government lacks capacity, citizen-based organizations take on public issues. Additionally, the low levels of fiscal decentralization at local levels would suggest that citizens would not spend time contacting local agents, as they do not have the budgetary decision-making power to fix the problems. The agreed result is counter to the high level of political decentralization, through districtification, despite the lack of fiscal decentralization. Individuals have a more open and easy access to government representatives when a public problem may arise.

In the factoring which removed these variables from the model, the research included the nation specific question on how involved a citizen has been at public budgeting meetings, if they knew one existed. Having a voice in how government revenue is spent on public services is meant to be one of the most important acts a citizen can participate in to hold government accountable and make one's preferences known. The budget meeting involvement variable did

not load in the factor analysis. Endeavoring to better understand these results, the study again looked at the basic tabulations and found that 74% of respondents were not even aware that these meetings occur. As previously mentioned in this research, Gina Lambright (2011) determined that in Uganda there is a disconnect between local officials and the citizenry. Public officials blame an apathetic citizenry for their lack of organizing and communicating community meetings and the citizenry blames lack of communication from officials for their lack of participation in community meetings. The vicious cycle does not bode well for the promotion of participation in the public space, which is the purpose of this study.

Lastly, there were several variables, and groups of variables, that formed potential outcomes from capacity leading to participation. With people's understanding, perception, and experience with public officials, what do people summarily think about their respective public officials and politicians. Oddly enough, the correlations involving trust and individual performance was counter to what one would suspect if the move to localized decision-making produced the expected benefits. Variables regarding national officials' levels of trust and performance (confidence) correlated at a higher level than that of the local government officials. The farther away a politician is from the people represented, the less likely the people can regularly be informed of what these politicians are doing on a day-to-day basis. On the other hand, the officials they have the most opportunity to see every day and talk to about their problems, the local officials, correlate relatively similar to that of the Tax Department.

The variables regarding performance of the politicians bares out this result to a lesser degree. And, whether local officials and MPs listen to constituencies did not correlate well at all. The results continue to reinforce the potential risk of moving decisions closer to the people without giving the capacity to those instructed to carry out those decisions to do so effectively. A

lack of capacity results in sub-optimal public services and a disheartened citizenry who took the time to participate in these decisions. Thus, trust and citizen's view on performance decreases. In this case, closer is not better and distance from central government allows those officials to present themselves in the most positive light due to decreased information to citizenry. As suggested in the literature review, implementation matters in public policy and it matters in decentralization. Poorly implemented decentralization can have the reverse effect as intended.

Additionally, and a wrinkle in the public space relationship of citizenry and government, the dominant correlating variance for this confidence factor was the ruling party, in terms of trust, in this case the National Resistance Movement, and not nearly as much on the opposition party. Beginning its existence as the National Resistance Army (NRA) in their bush war against Obote, the NRM has been present promoting Yoweri Museveni since 1986. It was the NRA which took the capital and when Museveni was established as the leader of the country it became the network of politicians, government officials, and military leadership, now known as the NRM, dependent on Museveni. When political parties were dissolved in 1986, the NRM remained, as it conveniently branded itself as a social movement and not a party, and its leadership was in charge of all the central government policy decisions. This means for twenty years the only well-organized network for elections and government maneuvering was the NRM. The NRM became synonymous with government and when political parties were allowed to reform in 2005, the NRM already had much of the structure in place. Looking at a cross-tabulation of Trust in the Ruling Party and Party Affiliation, the study found, as expected, half of respondents were a member of the NRM with another 25% being unaffiliated, and the rest distributed among opposition parties. Among NRM members, 70% at least somewhat trust the ruling party (NRM), whereas 80% of opposition members have little trust for the NRM, as

expected. Trust in Ruling Party's association in this factor appears to be caused by the sheer depth of the NRM's encampment into everyday life.

The final factor is meant to encompass citizens' approval of central and local officials' outputs of public services. In this approval factor, citizens answered the relevant questions in line with the rationale that low fiscal decentralization will result in local government officials not being able to steer finances toward the public services required to solve the problems citizens view as important. Of the five variables relevant to local public service, only three had significant correlations, while all 16 for central government did.

| Table 21: UGANDA | | | | | | | | | | |
|---|------|-------|---|------|-------|--|------|-------|-------|--|
| PARTICIPATION | | | CONFIDENCE | | | FAIR TREATMENT | | | | |
| Member of Community Group | Q25B | 3.53 | Trust-President | Q59A | 3.62 | How often people treated unequally | Q56B | 2.51 | 0.66 | |
| Member of Religious Group | Q25A | 3.08 | Trust-Parliament | Q59B | 1.99 | How often women treated unequally by traditional leaders | Q56C | 3.68 | -1.49 | |
| Join others to raise an issue | Q26B | 2.91 | Trust-National Election Cmte | Q59C | 3.60 | How often women treated unequally by police and courts | Q56D | 4.85 | 0.10 | |
| Attend a Community Meeting | Q26A | 3.82 | Trust-Tax Department | Q59D | 2.84 | How often women treated unequally by employers | Q56E | 4.40 | 0.50 | |
| Discuss Politics with Friends | Q15 | -0.14 | Trust- Local Government Council | Q59E | 2.92 | How often officials unpunished | Q56F | 1.70 | 2.21 | |
| Contact LG officials | Q30A | 1.71 | Trust-Ruling Party | Q59F | 3.88 | How often ordinary people unpunished | Q56G | 2.22 | -0.06 | |
| Contact MP | Q30B | 1.53 | Trust-Opposition Parties | Q59G | 0.01 | How often obtain household services without paying | Q56H | 2.56 | 0.58 | |
| Contact Government Agency | Q30C | 1.73 | Trust-Police | Q59H | 3.64 | How often avoid paying taxes | Q56I | 3.26 | -0.02 | |
| Contact Political Party official | Q30D | 2.47 | Trust-Courts | Q59J | 2.05 | How often party competition leads to conflict | Q52B | -1.03 | 1.16 | |
| Voted in National Election | Q27 | 0.04 | Performance- President | Q71A | 2.96 | How often president ignores laws | Q52C | 0.16 | 3.43 | |
| Persuade Others for a Candidate or Party: National Election | Q29B | 2.02 | Performance- MP | Q71B | 0.30 | How often opposition parties silenced by government | Q52D | 0.69 | 3.32 | |
| Work During Nat'l Election | Q29C | 1.85 | Performance- Local Government Officials | Q71C | 0.85 | How often president ignore parliament | Q52E | -0.42 | 4.76 | |
| Attend a Nat'l Campaign Event | Q29A | 1.85 | MPs Listen | Q62A | -0.62 | Trust-Opposition Parties | Q59G | -0.08 | 3.36 | |
| Attend Protest | Q26D | -0.16 | LGCs Listen | Q62B | 0.70 | APPROVAL | | | | |
| Used Force or Violence | Q26E | -0.13 | Freedom to say what you think | Q17A | 2.46 | Govt Handles Economy | Q65A | 0.97 | | |
| Refuse to Pay Tax | Q26C | 0.61 | Extent of democracy | Q42 | 2.20 | Govt-Living Standards of Poor | Q65B | -0.21 | | |
| Interest in public affairs | Q14 | 0.69 | Satisfaction with democracy | Q43 | 2.23 | Govt-Creating Jobs | Q65C | 0.90 | | |
| Close to political party | Q89A | 2.26 | Freeness and fairness of the last national election | Q28 | 2.15 | Govt-Keeps Prices Down | Q65D | 0.73 | | |
| Government bans organization vs. join any | Q19 | 1.67 | AUTHORITY | | | Govt- Narrowing Income Gap | Q65E | 0.91 | | |
| Difficulty to obtain medical treatment | Q67E | 1.66 | Problem: Too Expensive | Q68A | 1.18 | Govt-Reducing Crime | Q65F | 0.30 | | |
| Own radio | Q90A | 1.54 | Problem: Lack of Supplies | Q68B | 3.01 | Govt-Basic Health Services | Q65G | 2.37 | | |
| CORRUPTION | | | Problem: Poor Teaching | Q68C | 4.03 | Govt-Educational Needs | Q65H | 1.30 | | |
| Corruption: President | Q60A | 1.76 | Problem: Absent Teachers | Q68D | 2.84 | Govt-Water/Sanitation | Q65I | 1.58 | | |
| Corruption: MP | Q60B | 3.91 | Problem: Overcrowded | Q68E | 4.20 | Govt-Enough to Eat | Q65J | -0.07 | | |
| Corruption: Govt Officials | Q60C | 2.19 | Problem: Poor Facilities | Q68F | 3.45 | Govt-Fighting Corruption | Q65K | 0.76 | | |
| Corruption: LGC | Q60D | 4.04 | Problem: Too Expensive | Q69A | 2.11 | Govt-Resolving Violence between Communities | Q65L | 0.45 | | |
| Corruption: Police | Q60E | 0.77 | Problem: Lack of Supplies | Q69B | 2.96 | Govt-Combating HIV/AIDS | Q65M | -0.55 | | |
| Corruption: Tax Officials | Q60F | 4.19 | Problem: Lack of Attention | Q69C | 3.94 | Govt-Roads and Bridges | Q65N | 2.97 | | |
| Corruption: Judges | Q60G | 1.85 | Problem: Absent Doctors | Q69D | 2.51 | Govt-Electric Supply | Q65O | 2.21 | | |
| Problem: Long Waits | Q69E | 2.43 | Problem: Long Waits | Q69E | 2.66 | Govt-Empowering Women | Q65P | 0.21 | | |
| Bribe: Permits | Q61A | 4.92 | Problem: Dirty Facilities | Q69F | 1.84 | Local Govt-Maintain Roads | Q66A | 2.82 | | |
| Bribe: Water/Sanitation | Q61B | 4.65 | Had something stolen from house | Q10A | 1.95 | Local Govt-Local Markets | Q66B | 1.68 | | |
| Bribe: Local Health Clinic | Q61C | 5.45 | Responsible: MPs | Q72A | 5.93 | Local Govt-Health Standards in Restaurants | Q66C | 1.76 | | |
| Bribe: Police | Q61D | 3.56 | Responsible: LGCs | Q72B | 4.71 | Local Govt-Community Clean | Q66D | 1.82 | | |
| Bribe: School | Q61E | 2.80 | Responsible: President | Q72C | 3.34 | Local Govt-Use of Land | Q66E | 2.44 | | |
| Bribe: Nat'l Election | Q61F | 2.33 | Extent of democracy | Q42 | 2.54 | Your living conditions vs. others | Q4 | 2.52 | | |
| | | | | | | Most people can be trusted | Q87 | 1.94 | | |

Ghana

The observations by Inkoom (2001) regarding the lack of a formal civil society existing in the nation of Ghana is partly confirmed by the factor analysis. In the participation dimension, only community organization membership found any significance (low) in the main factor correlations. Additionally, though the formal structures for group action were not utilized by the citizenry for participation, and the citizenry did not find instances to come together even informally and participate in the public space to voice their concerns to the elected officials. The variables regarding attending community meetings, discuss issues with friends, and join others to raise an issue did not load heavily in the participation dimension. The end goal of these three questions is to inform others of the problems they see in the area, and primarily, the government officials responsible for handling the public services required to handle the problems. Interestingly enough, the governmental official which loaded least on the questions of whether the citizen has contacted them about problems in the community is Local Assembly Members. This is not in line with the fiscal decentralization situation in Ghana compared to the rest of Sub-Saharan Africa. The average 15% own revenue for local governments in Ghana (20% in this study) grants these officials some level of budgetary discretion to act upon those problems brought up by the citizenry during their participation. This does support the narrative by Olowu and Wunsch (2004) that control is still found in the central government and the highest form of government is still in perception and reality the most superior.

Interestingly, politics in participation was still expected to have some bearing on the associations for variables. The expectation was that citizens would still, to some degree, contact political officials when they had public problems over their local officials. The reasoning was that though nation power has peacefully changed political hands twice since Rawlings'

independence, there is still a high-level of patronage which occurs once the elections have occurred (Fox et al., 2011). The actual correlations did weigh more heavily on the member of Parliament, a government agency, and then party officials over local government. Based on the Campbell and Marshall (2000) typology this participation falls fairly low on the quantity and quality of participation. Participation in the group form did appear to load into its own dimension with collective actions around the national elections. Membership in community and religious organizations also loaded though to a much less degree. Strangely, support for the alternative selection of leaders other than through elections also loaded, along with bribery during elections. This suggests personal investment in political elections and perhaps disdain when the opposing party is the victor. The results signify the high-level of importance and competition citizens place on the election and the results and fallout from the results in the bureaucracy and the budgetary implications. These results may suggest political parties still play a role in participation, obviously, and citizens having a political affiliation different from their officials relating to participation.

Though not expected to load in the participation dimension, the variables “Interest in Public Affairs,” “Performance of Members of Parliament,” and “Listening to Members of Parliament and Local Government” had significant correlations. To try to understand why these variables also loaded in the dimension, it should be noted that often times the “listening” by officials is the other half of “contacting” these government officials with the assumption that the better officials listen the more contact there will be as it is more effective or is perceived to be more effective. Though the relationship is causal, the association is unsurprising in a factor. The focus on Members of Parliament leans again on the power and patronage from the central government. The involvement of “interest in public affairs,” in this factor is believed to grant

some credence to the argument the more affluent citizens have more free time and resources to dedicate to have an interest in public affairs impact decision-making on public services through participation.

The prediction for the corruption dimension to the model is that the local officials are perceived as being more corrupt than other officials. The reasoning for the prediction is the low amount of discretion central government gives to local governments in terms of public services, and the direction given by RCCs which are controlled by the central government. Though all variables regarding the corruption level of public officials had significant associations in this factor, minus the President, local government officials had the largest correlation, above the police, tax officials and all central government officials. As discussed in this nation's participation section, there is a moderately significant but a distinct level of group action at the local level separate to that of local government officials (civil society membership) and a weak correlation of "contacting Local Government," but significant correlations for the negative participation variables (protest, force, refused to pay taxes), suggesting that citizens view local government officials as less responsive to the needs of the citizenry or at least has some weak relationships between the two sets of actors. Additionally, though the level of fiscal decentralization may be low for western nations, it is fairly high for Sub-Saharan Africa and grants local officials some ability to solve these problems the citizenry views as important if the RCCs had less control. Of note, all variables around bribery had significant and similar associations.

In terms of unfair treatment (equality and justice), there is an obvious disconnect between how citizens perceive the treatment of officials and the ordinary citizens, particularly women. The unequal treatment of women in society loaded the highest with in the factor, followed next

by the belief that officials often go unpunished and then back to how ordinary people are treated unequally was less significant. This divide is in line with the broad indicator of Ghana's failure to centrally appoint women to 15% of assembly member positions. The point is two-fold, where the central government appoints women instead of them being elected and that even with the ease of appointment, the central government has not reached 15%. Interestingly, all three of the variables pertaining to who government officials are responsible to all loaded heavily in this factor rather than the Authority factor. Local Government Councils loaded the highest of all variables while Members of Parliament and the President loaded second and third of the Responsibility variables. In trying to understand the associations for responsibility tabulations were performed and did find a plurality for citizens being the actors which hold the government officials responsible. With the distribution of answers confirmed, this factor turns more into an advocacy factor, where citizens see unfair treatment of and believe those with some control over the treatment being responsible to them.

Regarding the more positive perception dimensions of the model (approval and confidence) both sets of variables around local and central governments did load with significant weights, though some more than others. For instance, in the approval dimension, approval of public services, under the control of central government consistently loaded higher than those executed by the local government. The only central government variables which did not load higher than local governments were those dealing with income inequality. Difficulty to obtain public services also loaded in the approval factor. This should have been expected by the researcher as means through which public services are obtained are as important as the ends of the public services. Additionally, performance of the President and Trust in a number of officials (President, Parliament, Local Government Councils, and ruling party) also loaded in this

dimension, and though it was unexpected, it was not improbable. As has been consistently shown through the literature and the factor analysis, these dimensions of relationships and perceptions are inherently linked. These results fall in line with the argument that local governments are not granted the support from central government to build their capacity and adequately address local public problems. Trust in local government only weighed heavier than the ruling party, which, given the contentious politics, is expected.

The approval dimension did not load equally among variables and levels of government and correlated with aspects of the confidence dimension. For confidence, neither trust, performance, nor listening had a distinct grouping of correlations for this factor. Each set of variables was found spread out among the other factors with Listening correlating with Participation, and the President's performance and trust of government official associating with Approval. The only noticeable difference is between that of the party in power and that of the opposition, which did not load anywhere. Despite the differences between the political parties, there appears to be some connect between the perceptions of government, with trust being unequally distributed in confidence and the perceptions of government actions, with unequal correlations in approval. Discussed in detail in the participation section, citizens with an interest in public affairs participate through group action directed away from local officials and through participating in political elections. Lastly, within the Authority dimension, problems loaded relatively equally, while responsibility to the citizenry did not load even weakly in this factor and instead was found in Approval, explained above.

| Table 22: GHANA | | | | | | | | | | |
|---|------|------|-------|---|------|----------|--|------|------|--|
| PARTICIPATION | | | | CONFIDENCE | | | FAIR TREATMENT | | | |
| Member of Community Group | Q25B | 1.83 | 1.95 | Trust-President | Q59A | **1.87 | How often people treated unequally | Q56B | 1.22 | |
| Member of Religious Group | Q25A | 1.05 | 1.90 | Trust-Parliament | Q59B | **1.64 | How often women treated unequally by traditional leaders | Q56C | 3.65 | |
| Join others to raise an issue | Q26B | 1.40 | 0.70 | Trust-National Election Cmte | Q59C | **0.54 | How often women treated unequally by police and courts | Q56D | 3.03 | |
| Attend a Community Meeting | Q26A | 0.77 | 1.07 | Trust-Tax Department | Q59D | **0.72 | How often women treated unequally by employers | Q56E | 2.67 | |
| Discuss Politics with Friends | Q15 | 0.15 | 1.44 | Trust- Local Government Council | Q59E | **1.40 | How often officials unpunished | Q56F | 2.61 | |
| Contact LG officials | Q30A | 1.77 | 1.00 | Trust-Ruling Party | Q59F | **1.28 | How often ordinary people unpunished | Q56G | 0.92 | |
| Contact MP | Q30B | 4.65 | 0.49 | Trust-Opposition Parties | Q59G | ** -1.14 | How often obtain household services without paying | Q56H | 2.73 | |
| Contact Government Agency | Q30C | 3.23 | 0.32 | Trust-Police | Q59H | ** -0.25 | How often avoid paying taxes | Q56I | 3.14 | |
| Contact Political Party official | Q30D | 2.08 | 1.23 | Trust-Courts | Q59J | **0.40 | How often party competition leads to conflict | Q52B | 1.34 | |
| Voted in National Election | Q27 | 0.78 | -0.79 | Performance- President | Q71A | **2.04 | How often president ignores laws | Q52C | 0.64 | |
| Persuade Others for a Candidate or Party: National Election | Q29B | 0.43 | 0.87 | Performance- MP | Q71B | **0.27 | How often opposition parties silenced by government | Q52D | 1.10 | |
| Work During Nat'l Election | Q29C | 0.3 | 3.81 | Performance- Local Government Officials | Q71C | ** -0.17 | How often president ignore parliament | Q52E | 0.57 | |
| Attend a Nat'l Campaign Event | Q29A | 0.95 | 3.44 | MPs Listen | Q62A | ** -0.67 | APPROVAL | | | |
| Attend Protest | Q26D | 3.11 | 0.65 | LGCs Listen | Q62B | ** -0.37 | Govt Handles Economy | Q65A | 1.89 | |
| Used Force or Violence | Q26E | 3.12 | 1.01 | AUTHORITY | | | Govt-Living Standards of Poor | Q65B | 1.54 | |
| Refuse to Pay Tax | Q26C | 1.80 | 1.38 | Problem: Too Expensive | Q68A | 3.37 | Govt-Creating Jobs | Q65C | 1.72 | |
| MPs Listen | Q62A | 3.54 | | Problem: Lack of Supplies | Q68B | 3.58 | Govt-Keeps Prices Down | Q65D | 0.83 | |
| LGCs Listen | Q62B | 3.03 | | Problem: Poor Teaching | Q68C | 3.40 | Govt- Narrowing Income Gap | Q65E | 1.08 | |
| Choose leaders through elections vs. other methods | Q34 | | 3.65 | Problem: Absent Teachers | Q68D | 3.24 | Govt-Reducing Crime | Q65F | 2.70 | |
| Bribe: Nat'l Election | Q61F | | 1.92 | Problem: Overcrowded | Q68E | 3.09 | Govt-Basic Health Services | Q65G | 3.02 | |
| CORRUPTION | | | | Problem: Poor Facilities | Q68F | 3.03 | Govt-Educational Needs | Q65H | 2.82 | |
| Corruption: President | Q60A | 1.93 | | Problem: Too Expensive | Q69A | 3.03 | Govt-Water/Sanitation | Q65I | 2.49 | |
| Corruption: MP | Q60B | 1.74 | | Problem: Lack of Supplies | Q69B | 2.78 | Govt-Enough to Eat | Q65J | 2.45 | |
| Corruption: Govt Officials | Q60C | 2.47 | | Problem: Lack of Attention | Q69C | 2.46 | Govt-Fighting Corruption | Q65K | 2.80 | |
| Corruption: LGC | Q60D | 3.44 | | Problem: Absent Doctors | Q69D | 2.60 | Govt-Resolving Violence between Communities | Q65L | 2.81 | |
| Corruption: Police | Q60E | 2.01 | | Problem: Long Waits | Q69E | 2.12 | Govt-Combating HIV/AIDS | Q65M | 1.98 | |
| Corruption: Tax Officials | Q60F | 2.08 | | Problem: Dirty Facilities | Q69F | 2.16 | Govt-Roads and Bridges | Q65N | 3.08 | |
| Corruption: Judges | Q60G | 1.28 | | Responsible: MPs | Q72A | *3.49 | Govt-Electric Supply | Q65O | 2.71 | |
| Payments required: self-employer taxes | Q73E | 3.45 | | Responsible: LGCs | Q72B | *4.12 | Govt-Empowering Women | Q65P | 2.43 | |
| How often opposition parties silenced by government | Q52D | 2.96 | | Responsible: President | Q72C | *2.02 | Local Govt-Maintain Roads | Q66A | 0.95 | |
| Your living conditions vs. others | Q4 | 2.08 | | **Factored with Approval | | | Local Govt-Local Markets | Q66B | 0.58 | |
| Support for democracy | Q32 | 2.07 | | *Factored with Fair Treatment | | | Local Govt-Health Standards in Restaurants | Q66C | 1.66 | |
| Difficulty to obtain medical treatment | Q67E | 2.03 | | | | | Local Govt-Community Clean | Q66D | 1.81 | |
| Bribe: Permits | Q61A | 1.52 | | | | | Local Govt-Use of Land | Q66E | 0.97 | |
| Bribe: Water/Sanitation | Q61B | 1.94 | | | | | Performance- President | Q71A | 2.04 | |
| Bribe: Local Health Clinic | Q61C | 4.04 | | | | | | | | |
| Bribe: Police | Q61D | 2.25 | | | | | | | | |
| Bribe: School | Q61E | 1.31 | | | | | | | | |
| Bribe: Nat'l Election | Q61F | 4.70 | | | | | | | | |
| Attend Protest | Q26D | 2.82 | | | | | | | | |
| Problem: Lack of Supplies | Q68B | 2.58 | | | | | | | | |
| Violence never justified vs. sometimes necessary | Q78 | 2.43 | | | | | | | | |

Tanzania

In the unique case of Tanzania, four dominant and intertwined institutional characteristics were believed to have some influence on the majority of dimensions: over six-decades of one party controlling central government; the socialist nationalist past with President Nyerere; the extreme heterogeneity of ethnicities in the nation; and decentralization implemented as a way to develop local areas through central control. For instance, the low level of locally generated revenue, coupled with high levels of decision-making control at central government, suggested local government officials will not be perceived as capable of solving local public problems leading in part to a lack of citizen participation through interacting with local government officials. When the study also considers the lack of civil society in Tanzania but with communal history, the expectation for participation is through informal community action.

Now, in terms of the actual factor results for the participation dimension, the variables did not load exactly as expected. For instance, the variables which loaded heaviest in the participation dimension were all the variables relating to how often the citizens contacted officials, including local government officials, along with working in national elections. Though the political party representatives and government officials still loaded heavier than local government officials, the local government officials' weight was unexpected with the strength of central government and the lack of fiscal decentralization. The best explanation would be the advances in the spatial decentralization aspect of political decentralization which has occurred in the past few decades in Tanzania. The nation now has 129 subnational governments, all of which have local councilors elected by the citizenry. Though they may have little power over their budgets, that closeness of the official, being able to walk to an office and share a problem, coupled with the local past, may be why they are contacted as often as they are and loads such in

the dimension. Additionally, and as expected, politics plays a role in this dimension. Not only was contacting their party representative the heaviest correlation. Those questions regarding involvement in a national political campaign also loaded significantly along with rejecting one-man rule. The expectation was that CCM's 63-year control of the central government institutions and everyday life, when considering the impact of social nationalism, would make politics relevant in participation. The variables regarding the more negative expressions of public participation (protest, force, refused to pay taxes) also loaded in the dimension. The explanation may be a derivative of the strong associations for political involvement and what contentions may result when the other political party wins.

Oddly enough, the variables connected to community action loaded significantly in a secondary participation dimension. Those questions referring to an informal group action, and surprisingly, formal group action, correlated into its own exclusive construct, implying a divide in the participation dimension in the Tanzania model between individual participation and community participation. The divide is within the realm of expectations under Campbell and Marshall's (2000) typology for participation; however, the results do run counter to two observations in Tanzania. For one, civil society is supposed to be sparse in Tanzania (Mercer, 2003), and second, government was thought to assume several of the civil society's roles because of this void. Not only does Tanzania appear to have a defined structure for group action, the group action variables load separate from those relating to government involvement.

Socialism is directly connected to the lack of an advocacy level civil society found in the country. Speaking early after the fall of the Soviet Union, Verdery explains a critical aspect of Eastern Europe's transition out of socialism, "will involve building up what many refer to as the 'civil society'... I take the creation of the civil society to mean the populating of an intermediate

social space-between the level of households and that of the state itself- with organizations and institutions not directly controlled from above (1991).” Every possible form of civil society from labor unions to charities were in some way adopted into the framework of the socialist institution and given a slant on the view they hold as part of the overarching socialist system. One of the main purposes of the state and the bureaucracy which socialism has an abundance of, is to acquire new responsibilities, new obligations in order to expand its importance in society.

All perceived corruption variables were able to load significantly, solely in one factor with only one other being “officials go unpunished.” Though they all loaded heavily, the broad “government official” variable is the highest correlation followed by Local Government Councilors, tax officials, Members of Parliament, police, judges, and the President. These results fall in line with the expected high correlations across all relevant variables based on the socialist past of the nation. However, the rankings in the distribution did not load as expected. As Member of Parliament are closer to the revenue decisions regarding streams, such as the natural resources, and a distance from the citizenry compared to local government officials may explain their associations. The President representing the bottom of elected officials suggests the citizenry sees the President as working to reduce corruption within the government apparatus. The Office of the President has enacted national programs, such as the Finance Act and the Public Procurement Act in the early 2000s in an attempt to reduce corruption (“Tanzania,” 2009). The well-received public acts help to explain the lower correlations. Additionally, whether officials go unpunished also loaded in this factor. This result allows the study to conclude that a strong group of Tanzanians in this data viewed the broader government as corrupt and that corruption as negative. The bribery variables did not load with the perception of corruption variables, but instead loaded with Authority’s questions regarding problems in local

clinics and schools. The coupling of the variable groups suggests the respondents view these variables as structural or institutional problems they experience, and that they see bribery as a concern and not normalized. The only unexpected result with the bribery variables and Approval is the inclusion of the variable focused on how a citizen identifies as either their ethnicity or their nationality. In trying to understand why this variable, potentially contradicting the assumption that ethnicity will have little impact on any factor or variable, loaded, a tabulation was performed of the variable. In line with the study's assumptions, only 4% of the respondents felt closer to their ethnicity than nationality, while 68% felt the other way, and 27% about the same for both identifications.

The Approval dimension loaded not as expected across all variables with local and central government's public services associations relatively the same and did not have the central government dominate. In the more intricate dimension of Confidence, the associations distributed, again, not as expected among the trust, performance, and listening variables. Having a strong central government and dominant political party, the expectation was that citizens trust in the President and ruling party would load the heaviest. Instead, what the analysis found was a reversal in the believed relationship between trust and the political power the different levels of government hold. The results strengthen the argument above for spatial decentralization creating confidence of citizens with them having easier access to their local officials. Trust in the opposition party did not load at all in this dimension, supporting the believed strength in the ruling CCM. Performance of the respective elected officials loaded in the same order as trust (Local Government Officials, Members of Parliament, and President) not as expected.

The high-level of budgetary decision-making control at the central level led the study to incorrectly assume actors in the central role are granted more positive perceptions from the

citizenry than the local government officials. However, legal authority may be more apparent than budgetary authority leading citizens to focus on local officials. Interestingly, whether Members of Parliament or Local Government Officials listened did not load significantly. Concerning the remaining aspects of the Authority dimension, variables regarding the responsibility to the citizenry by the elected officials (President, Members of Parliament, and Local Government Officials) variables loaded significantly in their own factor. Once again, Local Government Officials hold the heaviest associations with Members of Parliament second, and the President claiming the last association, supplying more support for the spatial decentralization aspect and the potential role of physical distance on citizens' rapport with local officials.

Though not all expected variables loaded significantly in the fair treatment dimension, similar to the correlations for all nations, the distribution and the addition of other variables unveils a rather chaotic and power focused political environment at the central and local levels. Not only do officials get punished but ordinary people do go unpunished and somehow are treated unfairly, along with women in particular. This is despite women representing 35% of local councilors (CLGF, 2018). Coupled with the variables regarding not paying taxes or paying for services, the chaos is expanded by the addition of variables focused on politicians' perceived lack of respect for laws and other branches of government. For instance, how often the President ignores both laws and Parliament loaded first and third in the fair treatment dimension. The governmental and institutional transition in Tanzania from a socialist nationalist one-party system to a capitalist democratic multi-party nation shows its flux with this dimension. Citizens see an unfair treatment of their fellow citizens by officials, practice a lack of respect for funding controlled by officials, and see officials' unfair treatment of one another.

| Table 23: TANZANIA | | | | | | | | | | |
|---|------|-------|-------|---|----------|------|--|------|-------|--|
| PARTICIPATION | | | | CONFIDENCE | | | FAIR TREATMENT | | | |
| Member of Community Group | Q25B | 1.42 | 3.41 | Trust-President | Q59A | 3.34 | How often people treated unequally | Q56B | 2.08 | |
| Member of Religious Group | Q25A | -0.09 | 3.52 | Trust-Parliament | Q59B | 3.93 | How often women treated unequally by traditional leaders | Q56C | 1.85 | |
| Join others to raise an issue | Q26B | 0.37 | 4.29 | Trust-National Election Cmte | Q59C | 4.43 | How often women treated unequally by police and courts | Q56D | 1.78 | |
| Attend a Community Meeting | Q26A | -0.17 | 5.04 | Trust-Tax Department | Q59D | 3.90 | How often women treated unequally by employers | Q56E | 0.34 | |
| Discuss Politics with Friends | Q15 | 1.88 | 2.25 | Trust- Local Government Council | Q59E | 4.18 | How often officials unpunished | Q56F | -0.46 | |
| Contact LG officials | Q30A | 3.77 | 0.25 | Trust-Ruling Party | Q59F | 3.66 | How often ordinary people unpunished | Q56G | 1.42 | |
| Contact MP | Q30B | 3.66 | -0.30 | Trust-Opposition Parties | Q59G | 0.54 | How often obtain household services without paying | Q56H | 3.21 | |
| Contact Government Agency | Q30C | 4.74 | 1.02 | Trust-Police | Q59H | 3.20 | How often avoid paying taxes | Q56I | 1.98 | |
| Contact Political Party official | Q30D | 5.03 | 0.33 | Trust-Courts | Q59J | 2.46 | How often party competition leads to conflict | Q52B | 2.17 | |
| Voted in National Election | Q27 | 0.53 | 1.55 | Market stalls in the PSU/EA | EA_FAC_E | 2.15 | How often president ignores laws | Q52C | 2.70 | |
| Persuade Others for a Candidate or Party: National Election | Q29B | 1.54 | 1.63 | Performance- President | Q71A | 3.96 | How often opposition parties silenced by government | Q52D | 1.68 | |
| Work During Nat'l Election | Q29C | 2.40 | 1.08 | Performance- MP | Q71B | 4.13 | How often president ignore parliament | Q52E | 3.24 | |
| Attend a Nat'l Campaign Event | Q29A | 1.20 | 1.16 | Performance- Local Government Officials | Q71C | 4.25 | Women have equal rights vs. subject to traditional laws | Q23 | 1.96 | |
| Attend Protest | Q26D | 1.56 | 0.27 | MPs Listen | Q62A | 1.01 | Obey government always vs. only if vote for it | Q49 | 2.30 | |
| Used Force or Violence | Q26E | 1.07 | -0.45 | LGCs Listen | Q62B | 0.94 | Overall direction of the country | Q7 | 2.11 | |
| Refuse to Pay Tax | Q26C | 0.84 | 0.31 | How often gone without food | Q8A | 3.16 | APPROVAL | | | |
| Interest in public affairs | Q14 | | 3.30 | People must pay taxes | Q48C | 2.91 | Govt Handles Economy | Q65A | 2.08 | |
| Location of toilet or latrine | Q95B | 2.08 | | Type of shelter of respondent | Q104 | 2.18 | Govt-Living Standards of Poor | Q65B | 2.73 | |
| CORRUPTION | | | | Level of democracy: today | Q46A | 2.00 | Govt-Creating Jobs | Q65C | 2.55 | |
| Corruption: President | Q60A | 3.26 | | AUTHORITY | | | Govt-Keeps Prices Down | Q65D | 1.59 | |
| Corruption: MP | Q60B | 4.26 | | Problem: Too Expensive | Q68A | 2.71 | Govt- Narrowing Income Gap | Q65E | 2.43 | |
| Corruption: Govt Officials | Q60C | 4.51 | | Problem: Lack of Supplies | Q68B | 3.69 | Govt-Reducing Crime | Q65F | 2.28 | |
| Corruption: LGC | Q60D | 4.49 | | Problem: Poor Teaching | Q68C | 4.03 | Govt-Basic Health Services | Q65G | 2.69 | |
| Corruption: Police | Q60E | 3.63 | | Problem: Absent Teachers | Q68D | 3.05 | Govt-Educational Needs | Q65H | 2.65 | |
| Corruption: Tax Officials | Q60F | 4.34 | | Problem: Overcrowded | Q68E | 3.43 | Govt-Water/Sanitation | Q65I | 2.55 | |
| Corruption: Judges | Q60G | 3.59 | | Problem: Poor Facilities | Q68F | 3.87 | Govt-Enough to Eat | Q65J | 2.61 | |
| How often officials unpunished | Q56F | 2.38 | | Problem: Too Expensive | Q69A | 2.47 | Govt-Fighting Corruption | Q65K | 2.35 | |
| Bribe: Permits | Q61A | 2.24 | | Problem: Lack of Supplies | Q69B | 1.10 | Govt-Resolving Violence between Communities | Q65L | 2.54 | |
| Bribe: Water/Sanitation | Q61B | 1.74 | | Problem: Lack of Attention | Q69C | 2.70 | Govt-Combating HIV/AIDS | Q65M | 2.03 | |
| Bribe: Local Health Clinic | Q61C | 2.08 | | Problem: Absent Doctors | Q69D | 2.98 | Govt-Roads and Bridges | Q65N | 2.93 | |
| Bribe: Police | Q61D | 2.14 | | Problem: Long Waits | Q69E | 1.11 | Govt-Electric Supply | Q65O | 2.48 | |
| Bribe: School | Q61E | 1.34 | | Problem: Dirty Facilities | Q69F | 2.65 | Govt-Empowering Women | Q65P | 1.57 | |
| Bribe: Nat'l Election | Q61F | 0.78 | | Responsible: MPs | Q72A | 4.36 | Local Govt-Maintain Roads | Q66A | 2.67 | |
| LOADED TOGETHER | | | | Responsible: LGCs | Q72B | 5.13 | Local Govt-Local Markets | Q66B | 2.78 | |
| | | | | Responsible: President | Q72C | 3.60 | Local Govt-Health Standards in Restaurants | Q66C | 2.77 | |
| | | | | Cell phone service in the PSU/EA | EA_SVC_D | 2.10 | Local Govt-Community Clean | Q66D | 2.64 | |
| | | | | Reported the incident to the police | Q10C | 2.04 | Local Govt-Use of Land | Q66E | 1.88 | |

OLS Models' Results

As previously noted, this is a cross-sectional analysis for one moment in time, causation of the independent variables on participation cannot be concretely established. The present analysis can only determine an association and seeks to justify potential causation through the literature. For instance, levels of approval for government services may be the result of intense participation by the citizen who, through the involvement in the policy and decision-making, knows the effort required for the service outputs.

General Decentralization

For the results to be comparable from one dataset to another, Political Decentralization, the most difficult variable to obtain information for based on hundreds of hours of research, is divided into its two composite parts, Strength of Political Decentralization and Spatial Political Decentralization. When both components have been found and are present, the model has run them separately and together as an interactive variable. The final regressions were executed in SPSS with pairwise deletion while missing were replaced and final indexes created in SAS and all other computations were done in Stata. All variables are addressed and discussed below. The relationships are shown with standardized and unstandardized coefficients in order to assess the raw impact and the relationships when the variances of dependent and independent variables are one. Political decentralization is presented in its component parts and, when available, together.

H1: Increasing levels of decentralization (Fiscal, Political) will have a positive association with participation in the public space

Decentralization Results. The decentralization variables produced intriguing and varying results when it comes to their influence on participation and are evaluated further here. Though not examined here, the study does note how decentralization levels may actually affect the other dimensions in this model. As previously discussed, central policy impacts the

parameters of the environment in which citizens develop their perceptions, have their experiences, and assess their demographics in comparison to others in the area. Before moving into the examination of decentralization's relationship with participation, it is important to note again that the central policy can have additional relationships with participation through its relationship with the other dimensions.

Fiscal Decentralization. Uganda and Ghana, along with the all nations database, did hold a relationship between fiscal decentralization and the participation index. However, the relationships were actually negative, meaning the more fiscal freedom the districts may have, the more likely individuals are to not participate in the public space. Ghana's significance may be related to the accountability local governments have toward their central counterparts rather than the citizenry. Unexpectedly, Tanzania did not have a statistically significant relationship between revenue controlled by subnational governments and the amount of participation citizens dedicate to the public space.

Political Decentralization. Once again, Uganda and All Nations had a statistically significant, yet negative, relationship between the composite variable, Political Decentralization, and Participation, suggesting, somewhat bewilderingly, more local governments means less participation. The results are more conflicting when assessing the components of political decentralization separately. In trying to understand the contradiction, in the discussion the study looks at the make-up and motivation for the local institutions to exist and maintain their local position.

Individual Characteristics

H2: Citizens with more conducive demographics (Financial Involvement, Fiscal Power, Politics, Ethnicity, Gender, Education) to public participation will have a positive association with participation in the public space

Along with the role of citizen's perceptions of and relationships with public officials, addressed below, the demographics of the citizen and how they may compare to those in their environment will also be important in the likelihood of the citizen's participation in the public space and said environment. These personal demographics can be categorized as those a citizen can control (active) and those they cannot (passive). Though these variables are of course discussed in detail in the literature review, brief descriptions are found here to better inform the reader of the final piece of the model moving forward. The categorizations that influence interactions with the public space which a citizen has the most control over are political party affiliation and, to a lesser degree, financial involvement, financial power, and education.

Financial Involvement. As expected, the role of Financial Involvement was found to have a positive relationship with Participation in All Nations and the nations of focus in this study. In support of these results, Mullins (2004) warned that participation left without any management (of whom to bring in to participate) could lead not to enhancement of entire communities but to support the self-interest of the few.

Fiscal Power. Fiscal Power in All Nations (first model), Uganda, and Ghana has a relationship with Participation, but unexpected for Ghana based on the literature surrounding individual wealth and public participation (Garcia-Zamour, 2001). Though several Western scholars have written on the subject in the Western context, this relationship between Fiscal Power and Participation has a more radical result in developing nations with subnational authoritarianism (Wiarda, 2003).

Gender. Those surveyed who are female have a negative relationship with participation in the public space in all countries and those in focus. An explanation of gender's relationship with participation may be intuitive to the average Western onlooker: these developing nations are

largely patriarchal, a point acknowledged with the quota system for women officials, and as such, men are more likely to participate in the public space given their inherent amount of power compared to women. However, it counters more recent development literature looking at what drives citizens to at least vote for one candidate or another.

Education. The level of education of the citizen has a significant relationship with the choice citizens make to participate in the public space in all nations except Uganda. Though this study's literature used has rebuffed Dahl's (1970) argument for uneducated individuals not participating in the public decision making, the data in this has firmly established the more educated a person is the more likely the individual will participate.

Ethnicity. While Uganda did have the expected results, Ghana did not and All Nations and Tanzania were not found to have a significant relationship between Ethnic Power and Participation. The lack of relationship between ethnicity and participation is understandable in Tanzania, given the national policy of reducing ethnic fragmentation.

Political Affiliation. As expected, political affiliation of public officials making up the subnational government and that of the citizen directly associated with the citizen's choice to participate in the public space in all datasets. The role of patronage and the two societies described by Ekeh (1975) remaining strong in Sub-Saharan Africa helps to explain this relationship.

Perceptions and Experience

H3: Citizens with more optimal perceptions of and relationships with local officials (Corruption, Accountability, Confidence, Approval, Fair Treatment) will have a positive association with participation in the public space

Heady (2001, p.299-302) described the characteristics of administrations in developing nations as: imitative of their western counterparts, deficiency of manpower for bureaucracies,

goals of personal preference over program goals, gap between expectations and actualities, and bureaucracies having operational autonomy. Hyden (2010) additionally pointed out that the reasons why the colonial institutions which remained after independence were immediately jeopardized by the new nation's leaders and citizens are that the western institutions had not taken into account local African values and the rising expectations of the citizenry could never be met by the capabilities of the administrative system regardless of the leaders' promises (cited Dia, 1995; Adu, 1969). The lack of capacity materializes itself in a number of forms and impacts here it manifests in Confidence, Authority, Approval, and even Corruption. The results of these aspects' roles on Participation are found below. Each index was expected to have a positive relationship with Participation except Corruption, which is negative.

A perceived lack of interest by the general population in the inner workings of politics at the level of local government is not universal. In his research of Ghana's local government system, Crawford (2008) found that, "the focus groups confirmed a keen awareness of the representative role of the Assembly member. In response to the question concerning how communities try to influence District Assembly decision-making, the Assembly Member was correctly identified in all discussions as the key means through which to channel community needs and demands" (124). It is crucial in a democracy for citizens to have some interest in politics so that they may participate in the decision-making of local governments. Serra (1995) found that the more people understand governmental issues, the more likely they are to contact local officials and participate in community meetings. However, poor experiences and negative perceptions of local government can impede this engagement.

Confidence. The Confidence index was found to have a significant relationship in all of the country datasets except that of Uganda. The two alienation groups of variables produced

unexpected results. Unfortunately, the level of “Trust” a respondent has in local officials is not associated with the likelihood of participating in the public space. Instead of the zero-sum game expected for the attention of the public between government and community organizations, the “Listening” variable indicates local councils which actively listen to and engage the public on concerns can increase the likely involvement of citizens in the public space.

Authority. In all datasets and all models, problems and responsibility, which make-up the Authority dimension, were seen to have the expected results with participation from those who were surveyed. When citizens view public officials as having authority, they are more likely to participate in the public space.

Approval. The approval of government services and how they perform them was found to have a positive relationship with citizens participating in the public space in Uganda. The results were inconsistent in the models for All Nations and not significant in Tanzania and Ghana. The lack of unified positive relationship among the countries suggests there may not always be an incentive for citizens to participate when they approve. A possible explanation could be that citizens who approve do not see a need to participate if the officials are already doing what they want.

Fair Treatment. How citizens perceive the treatment of ordinary people and those of privilege by officials in powerful positions is associated with participation by the citizens in Uganda and Tanzania; however, the relationship was not significant in Ghana and inconsistent in All Nations.

Corruption. The role of corruption in the three nations is the most unexpected relationship with the levels of participation from citizens. Rather than disheartening participation in the public space, views on and experience with corruption have a positive relationship with the

participation indexes. In trying to understand the results, participation can be in the form of corruption to buy results and benefits. For instance, a citizen may contact an official and offer a quid pro quo.

Table 24

| All COUNTRIES | | | | | UGANDA | | | |
|---|-----------------------------|-------------|---------------|-------------|-----------------------------|-------------|----------------|-------------|
| Model with Political Decentralization | Unstandardized Coefficients | | t | Sig. | Unstandardized Coefficients | | t | Sig. |
| | B | Std. Error | | | B | Std. Error | | |
| (Constant) | -.108 | .112 | -.959 | .338 | .016 | .115 | .141 | .888 |
| Financial involvement | .037 | .021 | 1.751 | .080 | .123 | .022 | 5.717 | .000 |
| Fiscal Power | -.046 | .022 | -2.091 | .037 | .150 | .021 | 7.098 | .000 |
| Fair Treatment | .070 | .021 | 3.325 | .001 | .103 | .022 | 4.652 | .000 |
| Corruption | .076 | .022 | 3.449 | .001 | .144 | .022 | 6.619 | .000 |
| Confidence | .056 | .023 | 2.393 | .017 | .005 | .024 | .225 | .822 |
| Authority | .064 | .019 | 3.284 | .001 | .061 | .021 | 2.948 | .003 |
| Approval | .048 | .022 | 2.134 | .033 | .106 | .023 | 4.647 | .000 |
| Age | .011 | .001 | 8.281 | .000 | .008 | .001 | 5.887 | .000 |
| Education | .059 | .010 | 5.944 | .000 | .017 | .010 | 1.707 | .088 |
| Gender-Female | -.306 | .035 | -8.626 | .000 | -.372 | .036 | -10.453 | .000 |
| SNU Ethnicity | -.038 | .023 | -1.643 | .101 | .073 | .022 | 3.315 | .001 |
| Party Agree | .310 | .036 | 8.600 | .000 | .128 | .037 | 3.438 | .001 |
| Local Govt Revenue | -.010 | .002 | -6.427 | .000 | -.046 | .011 | -4.100 | .000 |
| Political Decentralization | -.152 | .033 | -4.581 | .000 | -.106 | .025 | -4.189 | .000 |
| a. Dependent Variable: Participation | | | | | | | | |
| b. Weighted Least Squares Regression - Weighted by Within country weighting factor | | | | | | | | |

Table 25

| All COUNTRIES | | | | UGANDA | | |
|--|---------------------------|--------|------|---------------------------|---------|------|
| Model with Political Decentralization | Standardized Coefficients | t | Sig. | Standardized Coefficients | t | Sig. |
| | Beta | | | Beta | | |
| (Constant) | | -.959 | .338 | | .141 | .888 |
| Financial involvement | .036 | 1.751 | .080 | .111 | 5.717 | .000 |
| Fiscal Power | -.047 | -2.091 | .037 | .150 | 7.098 | .000 |
| Fair Treatment | .070 | 3.325 | .001 | .102 | 4.652 | .000 |
| Corruption | .076 | 3.449 | .001 | .140 | 6.619 | .000 |
| Confidence | .058 | 2.393 | .017 | .006 | .225 | .822 |
| Authority | .066 | 3.284 | .001 | .063 | 2.948 | .003 |
| Approval | .049 | 2.134 | .033 | .109 | 4.647 | .000 |
| Age | .169 | 8.281 | .000 | .119 | 5.887 | .000 |
| Education | 0.036 | 5.944 | .000 | .037 | 1.707 | .088 |
| Gender-Female | -.170 | -8.626 | .000 | -.207 | -10.453 | .000 |
| SNU Ethnicity | -.032 | -1.643 | .101 | .063 | 3.315 | .001 |
| Party Agree | .171 | 8.600 | .000 | .069 | 3.438 | .001 |
| Local Govt Revenue | -.158 | -6.427 | .000 | -.092 | -4.100 | .000 |
| Political Decentralization | -.102 | -4.581 | .000 | -.094 | -4.189 | .000 |
| a. Dependent Variable: Participation | | | | | | |
| b. Weighted Least Squares Regression - Weighted by Within country weighting factor | | | | | | |

Table 26

| Model with Political Decentralization Disaggregated | All COUNTRIES | | | | UGANDA | | | | TANZANIA | | | | GHANA | | | |
|--|--------------------------------|---------------|--------|------|--------------------------------|---------------|--------|------|--------------------------------|---------------|--------|------|--------------------------------|---------------|---------|------|
| | Unstandardized Coefficients | | t | Sig. | Unstandardized Coefficients | | t | Sig. | Unstandardized Coefficients | | t | Sig. | Unstandardized Coefficients | | t | Sig. |
| | B | Std. Error | | | B | Std. Error | | | B | Std. Error | | | B | Std. Error | | |
| (Constant) | .192 | .119 | 1.620 | .105 | .041 | .121 | .339 | .735 | -.472 | .133 | -3.546 | .000 | .244 | .112 | 2.182 | .029 |
| Financial Involvement | .061 | .022 | 2.821 | .005 | .122 | .022 | 5.643 | .000 | .071 | .023 | 3.098 | .002 | .097 | .020 | 4.816 | .000 |
| Fiscal Power | -.002 | .023 | -.101 | .920 | .150 | .021 | 7.075 | .000 | -.022 | .021 | -1.07 | .284 | -.090 | .027 | -3.374 | .001 |
| Fair Treatment | .031 | .022 | 1.384 | .167 | .103 | .022 | 4.661 | .000 | .205 | .022 | 9.293 | .000 | .035 | .020 | 1.736 | .083 |
| Corruption | .071 | .022 | 3.218 | .001 | .145 | .022 | 6.655 | .000 | .145 | .024 | 6.152 | .000 | .045 | .020 | 2.251 | .024 |
| Confidence | .040 | .024 | 1.673 | .094 | .009 | .024 | .362 | .718 | .052 | .024 | 2.199 | .028 | .110 | .023 | 4.747 | .000 |
| Authority | .055 | .020 | 2.793 | .005 | .062 | .021 | 3.037 | .002 | .052 | .020 | 2.614 | .009 | .066 | .020 | 3.365 | .001 |
| Approval | .040 | .023 | 1.793 | .073 | .104 | .023 | 4.585 | .000 | .023 | .022 | 1.049 | .294 | .039 | .025 | 1.522 | .128 |
| Age | .011 | .001 | 8.466 | .000 | .008 | .001 | 5.858 | .000 | .011 | .001 | 7.716 | .000 | .009 | .001 | 7.308 | .000 |
| Education | .048 | .010 | 4.901 | .000 | .017 | .010 | 1.737 | .083 | .094 | .014 | 6.545 | .000 | .066 | .010 | 6.599 | .000 |
| Gender-Female | -.304 | .036 | -8.549 | .000 | -.373 | .036 | -10.48 | .000 | -.248 | .037 | -6.69 | .000 | -.413 | .036 | -11.501 | .000 |
| SNU Ethnicity | -.023 | .024 | -.995 | .320 | .065 | .023 | 2.880 | .004 | .008 | .025 | .330 | .741 | -.069 | .024 | -2.850 | .004 |
| Party Agree | .302 | .036 | 8.330 | .000 | .124 | .037 | 3.332 | .001 | .200 | .039 | 5.103 | .000 | .253 | .037 | 6.824 | .000 |
| Local Govt Revenue | -.019 | .003 | -7.595 | .000 | -.038 | .012 | -3.037 | .002 | .001 | .004 | .222 | .824 | -.004 | .002 | -2.192 | .028 |
| Spatial | .063 | .028 | 2.240 | .025 | -.089 | .020 | -4.367 | .000 | -.199 | .038 | -5.29 | .000 | -.049 | .023 | -2.092 | .037 |
| Party Strength | -.161 | .051 | -3.176 | .002 | -.028 | .067 | -.419 | .675 | * | * | * | * | * | * | * | * |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Within country weighting factor

Table 27

| ALL COUNTRIES | | | | UGANDA | | | TANZANIA | | | GHANA | | |
|---|--------------------------------------|--------|------|--------------------------------------|---------|------|--------------------------------------|--------|------|--------------------------------------|---------|------|
| Model with Political Decentralization Disaggregated (Constant) | Standardized Coefficients Beta | t | Sig. | Standardized Coefficients Beta | t | Sig. | Standardized Coefficients Beta | t | Sig. | Standardized Coefficients Beta | t | Sig. |
| | | 1.620 | .105 | | .339 | .735 | | -3.546 | .000 | | 2.182 | .029 |
| Financial Involvement | .059 | 2.821 | .005 | .110 | 5.643 | .000 | .068 | 3.098 | .002 | .093 | 4.816 | .000 |
| Fiscal Power | -.002 | -.101 | .920 | .150 | 7.075 | .000 | -.023 | -1.073 | .284 | -.089 | -3.374 | .001 |
| Fair Treatment | .031 | 1.384 | .167 | .102 | 4.661 | .000 | .203 | 9.293 | .000 | .034 | 1.736 | .083 |
| Corruption | .071 | 3.218 | .001 | .141 | 6.655 | .000 | .146 | 6.152 | .000 | .045 | 2.251 | .024 |
| Confidence | .041 | 1.673 | .094 | .009 | .362 | .718 | .056 | 2.199 | .028 | .114 | 4.747 | .000 |
| Authority | .057 | 2.793 | .005 | .065 | 3.037 | .002 | .055 | 2.614 | .009 | .067 | 3.365 | .001 |
| Approval | .041 | 1.793 | .073 | .107 | 4.585 | .000 | .025 | 1.049 | .294 | .041 | 1.522 | .128 |
| Age | .173 | 8.466 | .000 | .119 | 5.858 | .000 | .168 | 7.716 | .000 | .147 | 7.308 | .000 |
| Education | .102 | 4.901 | .000 | .038 | 1.737 | .083 | .142 | 6.545 | .000 | .144 | 6.599 | .000 |
| Gender-Female | -.169 | -8.549 | .000 | -.208 | -10.481 | .000 | -.140 | -6.694 | .000 | -.225 | -11.501 | .000 |
| SNU Ethnicity | -.020 | -.995 | .320 | .056 | 2.880 | .004 | .007 | .330 | .741 | -.056 | -2.850 | .004 |
| Party Agree | .167 | 8.330 | .000 | .067 | 3.332 | .001 | .111 | 5.103 | .000 | .132 | 6.824 | .000 |
| Local Govt Revenue | -.294 | -7.595 | .000 | -.075 | -3.037 | .002 | .007 | .222 | .824 | -.067 | -2.192 | .028 |
| Spatial | .077 | 2.240 | .025 | -.107 | -4.367 | .000 | -.168 | -5.292 | .000 | -.064 | -2.092 | .037 |
| Party Strength | -.069 | -3.176 | .002 | -.008 | -.419 | .675 | * | * | * | * | * | * |
| a. Dependent Variable: Participation | | | | | | | | | | | | |
| b. Weighted Least Squares Regression - Weighted by Within country weighting factor ⁸ | | | | | | | | | | | | |

⁸ All Nations also done with all weights with same relationships and significance found.

Discussion

The results produced by the factor analysis and the ordinary least-squared regressions require further explanation, from the literature when possible, to better understand how they can be valid in the broader population. Below, the study attempts to reconcile what the data is showing and what expert opinions may use as explanations. First, the research takes an honest reassessment at how the dependent variable, participation, and the independent variable most central to the study, decentralization, were measured in the model. From there, results are discussed.

Participation

As previously written, participation in the decision-making of an organization is meant to bring buy in from members or constituencies and a watchful eye of accountability for meeting goals; however, this is not an absolute in a government environment. Though the study incorporated a number of environmental factors into the model, there are unmeasured variables which could have hindered or helped participation. For the relationship of government and constituencies to be most effective in reinforcing the promotion of one another, Mullins (2004) determined certain ideal conditions should be strived for, such as local government officials having powers over resources and budgets, ability to recall said officials by the public participating, channels through which citizens can voice disapproval or fondness for government, a free press, political freedom/stability, and, agreeing with Brynard (1996), a classless society. It is under these ideal conditions in which participation can most easily be a vehicle of the community to bring accountability for local government officials and their policies through building empowerment and grant a better understanding of how and why some dimensions had particular results on participation. Though the study incorporated the majority of these

parameters into the model, more could have been done to isolate and utilize these dimensions. For instance, whether a citizen believes officials listen to them can be viewed as a sign of empowerment in and of itself and more analysis could have been done to possibly frame this unused dimension. Instead, the study allowed Zhou and Zhang (2009) and Moehler (2007) to steer the broad framework of the model. Empowerment is what gives communities incentives to continue to participate. Participation in a policy decision without the empowerment of those who invested their time to participate strips the process of any intended accountability mechanisms and does not encourage future engagement by those groups and individuals (Brynard, 1996; Mullins, 2004).

Reassessing the role of local governments and governments in general, the promotion of community self-reliance to solve issues outside the government's leadership is still a significant instrument for change, and as such can find substantial donor funds in particular project areas. Boosting civil society may isolate district officials (Okidi and Goluba 2008). A strong majority of Ugandans support a sort of hybrid governance scheme combining the efforts of government and INGOs. Based on national polling data, 70% of citizens believe nonprofits could assist local governments even more in the provision of services (Afrobarometer, 2008). However, NGOs are not always welcomed by local government officials, who are often threatened by charitable organizations moving in on district responsibilities (Lambright, 2011). The question of "turf" becomes relevant, and many view the relationship between government and civil society as contentious rather than synergistic, this point being discussed in more detail below. These environmental dynamics are most crucial in developing countries trying to democratize, as local governments are structurally in flux and lack independent capacity to be a superior or equal partner (Mercer, 2003).

Decentralization

Assumptions and conditions unmet for decentralization. Four assumptions underlie decentralization as a means of increasing quality in service delivery. These assumptions address the specifics around the conditions of how decentralization could be implemented effectively and include the following: 1) better access to information regarding local needs; 2) localized decision-making that provides more effective development planning; 3) increased resource availability; 4) an enhancement of local administrative performance (Conyers, 2007). The ideal results for this study's model are an increase in participation from an increase in decentralization, positive views and experiences citizens have had with the government, and individual characteristics, much in line with the assumptions. In addition—and perhaps more importantly—decentralization assumes that central government authorities will show consistent enthusiasm toward building local governance capacity. Elites are not always so accommodating in areas that involve their relinquishing of powers in either country. Matching well with the assumptions of decentralization, Samoff (1990) identifies three factors along these lines that often prevent decentralization from being successful: 1) policy changes were only symbolic and kept the status quo of central authority; 2) goals were unrealistic for the designated amount of time; and 3) decentralization was unable to boost local capacity because of an overarching national supervision. It is these assumptions and factors that help to explain the puzzling results of decentralization on participation. Smoke (2003) observed, “If local people participate in public decision-making processes and see no concrete result because local officials have inadequate power and resources to deliver services, they may become disillusioned and cynical about local government.” For instance, it may mean little for citizens to elect their local officials (political),

if those officials have no control over budgets (fiscal). Political decentralization can result in little change if they are not implemented successfully at the local level.

Fiscal Decentralization. The unexpected results regarding Uganda, Ghana, and the collective datasets on fiscal decentralization's impact on participation requires additional analysis. In Uganda, after the revolution in 1986, decentralization was backed by international donors like the World Bank and International Monetary Fund (IMF) who were anxious to fund “good governance” and “bottom-up” development (Awortwi, 2010). Over the decades, the national government has reestablished authority in the capitol, central authorities have withdrawn many of the powers originally delegated to the district. Much of the discretion for district leaders to determine independently the needs of the district has been reduced by a shift in “conditional” grants from the central government—now comprising 85% of their overall budgets—that limit districts from pursuing policy goals that differ from those espoused by central government officials (Okidi and Guloba, 2008). As central discontent grew through the years of the Amin and Obote dictatorships, the desire for local autonomy was given an outlet with the NRM's resistance councils and culminated with the Mamdani Commission⁹ and subsequent legislation. More recently, powers have begun to shift back to the central government suggesting what little fiscal control even the most independent local governments may have is still confined by the national powers.

Surprisingly, Tanzania was not found to have a relationship between fiscal decentralization and participation from their citizenry. Regarding Tanzania, national coffers were intending to provide one-fifth of the central government's budget to the districts after the

⁹ The Mamdani Commission has already been discussed. For now, the group was meant to be a coming together of the different relevant actors for a first attempt at creating a new governmental structure.

elimination of the development levy in 2003 (Mwasa & Ndulu, 2008). However, as discussed in the country's case study, intention and implementation are not the same, resulting in some areas receiving a larger share than what they put in or what the distribution formula dictates and some receiving less (Weinstein, 2011). The unpredictable distribution of funds to the local levels not only shows the power in the capitol but also signifies a disconnect from sound fiscal decentralization and development policy. Without citizens' financial buy-in bearing fruit in local budgets, it can be expected that their levels of participation will not be significantly related to fiscal decentralization.

Based on the results, one explanation could be that the variance found in the local government budget variable is too minimal for citizens to realize any benefit in participating, while a latent variable is partially causing these unexpected results. Additionally, the results could be explained by a lack of citizen awareness regarding the level of local revenue; the inconsistent grant amounts from the central government which may affect the local revenue as a percentage; and a lack of real capacity at the subnational level to handle the locally generated revenue which the subnational government is in charge of spending. As previously discussed, there is a disconnect between what the local government does and what citizens see (Lambright, 2011). Also, the real value of percentage of the budget local officials have control over may help to explain these results. Though Uganda's local governments are able to implement and collect on rates for such things as property taxes, the share of their budgets represented is so small since the end of the graduated tax that there may not be much they can do with this freedom in terms of additional public services for the citizenry beyond what has been directed by the central government through the conditional and unconditional grants. Lastly, a low percentage of locally generated revenue may be indicative of a more impoverished district, coupled with Uganda's

history of local self-sufficiency, participation may be higher for those districts because citizens see the need for their help.

Political Decentralization. In trying to understand the unexpected results, there are several reasons often given by researchers and politicians for the distribution of subnational government units in decentralizing Africa which rarely survived academic vetting. The failure of these potential benefits may help to explain the unexpected results decentralization had on participation. For example, based on a policy perspective, decentralization intends to bring service provisions closer to the people. The idea was local people would be able to help determine the best use of services and help build up the area. However, as Green (2010) notes for the Uganda case:

... using HPI [Human Poverty Index] data from 1996 and HDI [Human Development Index] data from 1995 as predictors for the creation of new districts in 1997 and 2000, however, produced no significant results... Indeed, when pressed upon this issue, district leaders often admit that the creation of new districts creates as many logistical and administrative problems as it solves. (89)

From a human development perspective, it appears decentralization has failed in one of its primary purposes in Uganda. This failure along with the opposite than expected relationship between political decentralization and participation is a quandary, as Devas and Grant (2003) suggests that the opportunity for citizen participation was greater in Uganda than in most developing countries. For instance, local radio stations frequently offering airtime for local officials and providing the opportunity for any citizen to call in and voice their complaints and questions. Nonetheless, there is also ample evidence that these opportunities are greater in more affluent districts, that the frequency of local meetings, in general, is lacking, and that barriers to

the lower socio-economic levels of the population remain (generally economic conditions). Another necessary issue is the availability of choice in elected officials. Perhaps even more important is the ability of officials to be responsive given their limited financial options. To make the case even more clear, in the poorest districts, even providing a basic level of service is difficult. Given the amount of control that the central government holds through its conditional grants, there is very little left over to provide a basic level of autonomy. Based upon field research by Jean, Lee, Malarkey, and McMahon (2010), local officials are less concerned about the central government's control because in most cases local priorities have been steered by national priorities. Uganda appears to have a primed citizenry for participation but lack the economic capacity and independence of local government officials for the political aspects of decentralization to impact.

As discussed, districts and the citizenry come to rely on the instruction and direction of the central government. When planning for new local governments, the capacity of local leaders to construct, execute, and administer the public institution is often overestimated (Okidi and Guloba, 2008). As such, new districts need to be maintained or even directly controlled by the central government, allowing the councils to become more acquainted with the complexities of the central-local-citizenry interactions in decentralization. While more established districts (e.g. the original 33 formed at the NRM's takeover of power 25 years ago) have arguably institutionalized the roles of the government, new local councils can flounder with the task of running a district. Without an adequate, pre-existing, qualified pool of job applicants, a new government will grow dependent on the skills of the central government, highlighting how creating new districts compromises the requirement of human capacity for devolution (Boone, 2003).

Though political decentralization did not have the expected results on participation, there are still contemporary examples which clarify the benefits when implemented correctly. For instance, Rwanda understood powers cannot simply be devolved to the local level and there be an assumption that everything will fall into place with development close behind. The Community Development Policy of Rwanda states:

The mere fact of opting for decentralization shall not by itself ensure that the population effectively participates in its development which is the ultimate goal of a good policy of decentralization and good governance. It is important to set up mechanisms reassuring the participation of the population especially in a country like Rwanda where the community, which constitutes the base of community development, is rather skeptical because, in the past, it was not fully involved in its development (Cited in Kauzya, 2007)

With this in mind, Rwanda's post-genocide government created Community Development Committees which were meant to draw citizens together, define communal problems, and how to solve them with local and central funds (Kauzya, 2007). Other nations have not taken as productive and engaged efforts to increase local participation. The move toward local government structures mean to not only bring development to areas, but the improvements in subnational governments mean to come from a more democratic system in decentralization. Nelson (1987) states, "Participation is simply the efforts of ordinary people in any type of political system to influence the actions of their rulers, and sometimes to change their rulers." When the nuances of decentralization are not respected by the implementing actors, a recentralization can occur obviously reducing the intended importance of participation (e.g. fiscal recentralization in Ghana and Tanzania). It can also be argued that not meeting the

citizenry's expectations, based on the level of participation the level has invested, can lead to disengagement by the citizenry.

Though addressed in the literature review, there is a simple and fundamental question that cannot be answered based on the information provided across the nine nations and multiple data resources and as such, was assumed to be in the affirmative. This study focused not simply on what could be measured, but what was perceived and what was practiced and to its detriment, what was actual. However, given the lackluster impact decentralize has had in the models, it should be revisited. Should these nations try to decentralize in the first place? Due to high levels of poverty, it is unlikely citizens would move to areas better satisfying their needs in the public domain, reducing efficiencies meant to be found in Tiebout's model. Additionally, Oates believed movement of decisions to lower levels would be most efficient when there are less benefits of a single unified implementation. As Bahl and Wallace (2005) put it, "The more diverse the preferences within a country, the greater the efficiency gains from assigning these functions to local government" (p. 84). However, given a countries level of development, public problems may not vary as much as an industrialized nation, along their ability to solve the problems. The mixed results of this study do not necessarily suggest decentralization in all forms should be erased from future governments' public policies on development. Instead, as has been an underlying theme of the entire study, decisions should be made intentionally, with a full understanding of the situation on the ground and how the policy will interact with the situation.

Individuals in the Public

Financial Involvement. In all datasets it appears that the more often a citizen is financially involved with government through paying taxes and fees, the more positive the participation dimension will be. This falls in line with the belief that the more citizens invest in

government and its services the more they will expect from government officials and contact them to assure those results. The existing levels of local public participation exercised by the average citizens does not bode well for Sub-Saharan Africa. In terms of citizens possessing little information about the formal local decision-making process in the public space, this characteristic is viewed in participation literature as hindering participation. If the average impoverished citizen has not been informed about the opportunities to participate, how can they participate? Susan Steiner (2008), discussed the case of Uganda explaining how the ease of access to public information and meetings for citizens has not been met with similar levels of inquiring about the information. Though a number of possible reasons are offered for this disconnect, including opportunity costs and prior low education on topics, ignorance is concluded as the overarching factor. However, the results of the study suggest personal experience with the government in activities unrelated to government solving local problems is strongly related to public decision-making.

Fiscal Power. The promotion of participation by way of the financial position a citizen has in the community resulted in some odd relationships with Uganda having a significant positive, Ghana significantly negative, and Tanzania not having significance either way. While Tanzania's socialist background offers some clarity on its results, Uganda and Ghana need further assessment. Continuing from the above, the divide between the haves and the have-nots leads to a small set of wealthy individuals having a disproportionate amount of influence on public decision making, despite the fact that most decisions directly impact the large impoverished population. The accepted cause for the relationship between fiscal power and participation is that those with more wealth have more free time allowing them to participate. Their investment of free time in the public space is more fruitful and incentivized given the

potential disposable income they may have to dedicate to their solution or view on a public decision or persuasion of the final decision maker. This is what is found in the Uganda sample and is what is typically expected.

Though the norm, the positive relationship between fiscal power and participation is not necessarily good. If only the affluent try to set the agenda, then only those problems seen as important by the elite will be addressed. This would leave several severe problems (eg. broken wells, poor road/footpath conditions in more sparsely populated areas) left unresolved primarily because the local government officials are not being told the problems are important. Elite capture should be understood, based on the decision-making, organization theory, public administration, and development literatures, that representative leaders need to include those affected in the decision-making process, for government policy to be successful in achieving its goals. For instance, the public should be consulted in a democracy for public services and specific, crucial groups when the groups are most impacted (e.g. the poor with any social services).

In more extreme cases, particularly Uganda, subnational authoritarianism is most devastating to participatory development and counter-productive to the intentions of the strategy for more local government independence when only a minority of the population needs mollification in order to hold the position. In this instance, the group in control locally may be relatively small but affluent and influential in steering the local government. Garcia-Zamour (2001) determined that there are two realities for citizens in developing countries, those who are the elite that can afford to spend time in government and the poor that spend none of their time participating in politics and focus primarily on work. This imbalance in the investment of time into the political process is a drive-in subnational authoritarianism or elite capture. A wealthy

minority group in power will choose redistribution to their group over general development leading to alienation of other groups (Adam and O'Connell, 1998). In other words, they opt for a large benefit for a few instead of a small but noticeable benefit for all. For example, there appears to be a disconnect in terms of political participation between local citizens and local leaders in Uganda. Local government fault the poor participation for the absence of gatherings and voters fault the local government's absence of regular gatherings for their indifference toward the process. (Lambright, 2011; Goluba-Mutebi, 2004). The disproportionate opportunity to participate threatens the validity of local and district councils in rural and desperate areas, as there is an obligation for interaction and participation from the constituency (Kakumba, 2010).

Now, the move to a more decentralized system was meant to encourage popular participation in helping district officials develop strategies for addressing the specific problems of the area. With a push for greater participation of the poor through decentralization, this may help explain the negative of relationship in Ghana; however, this dataset and its case study did not find fiscal decentralization to be significant in participation. The negative relationship is still not ideal, as it still means there is a disparity within the citizenry. Additionally, the lower participation among the affluent may be due to the efficiency and effectiveness they have in their participation, which would not require them spend additional time trying to influence public officials.

Attempting to resolve the imbalance, the most popular response to the divide is stronger poverty reduction policies from central government, which is a long-term solution to a more immediate problem. Local short-term solutions would be in line with more access to the public space by increasing for instance, the number of community meetings and planning them around when the majority have their limited free time, such as after people come back from their fields.

Additionally, based on Lambright's (2011) observations in Uganda, doing a better job of communicating when meetings are, what will be addressed, and its potential impact on citizens. In this instance, the changes would both reduce the personal cost citizens with less fiscal power would need to spend and increase the effectiveness the citizens would find in investing their free time. Such local changes will not close the gap between rich and poor, but they will help mollify the impact of this gap in the public space.

Gender. Across all datasets, female respondents had significant negative relationships with the participation dimension. These results do appear counter to literature. In a natural experiment in Benin, Wantchekon (2003) found men to be more responsive to the more basic patronage, similar to vote buying behavior, while women react to the more intricate national platform appeals of policy solving national problems. The explanation offered by Wantchekon (2003) is that women are more aware of national problems and the intricacies of the potential solutions needed. Women obtain this knowledge through daily interactions with others in markets and obtaining local services like public schooling and health services for their children. The interactions and experiences are thought to build an informal knowledge on their national and local environments which allow them to have a more nuanced understanding of the issues and, was assumed, to have more effective acts of participation in the public space. The counter results require reassessment. Though women may discuss national issues more often and respond better to politicians who offer informed platform during elections, rather than patronage, it does translate to an action between elections. Additional research revealed that women may have the correct understanding of issues to engage more effectively in participation on public problems but are not likely to have as much free-time given an unbalanced share of household responsibilities and income-generating activities (Payer, 1983).

Education. With sound theory, education had a significant relationship in all but Uganda. The original rationale for more education being associated with higher levels of participation was that citizens will have more predisposition to understand complex decision making through courses and academic discussion, some of which potentially on government and civics (Crook and Manor, 1998). In line, citizens with education will have a better understanding of the benefits of participating in the decision-making process and how best to participate effectively. (Garcia-Zamor, 2001, p. 37) More awareness citizens have about government, the more likely they are to contact the government. In an ideal scenario, community organizations will work hand-in-hand with local governments to develop localized civics trainings with the intent of building the understanding of citizens who did not have the opportunity for formal education, so they can have the capacity to participate effectively and efficiently in the public space. The efforts would draw in more voices, otherwise not heard, which not only brings more buy-in and support of decisions but also add new perspectives and viewpoints on problems potentially enhancing the solutions (Campbell and Marshall, 2000). In terms of government and policy, the training should help close the information gap between the formally educated and those less fortunate.

For the Tanzania example, education is a legitimate variable staving off the effects of resource curse and a major policy initiative under the Nyerere regime. Though having a more creative slant on what this intellect is, Nyerere explained, “There is only one way in which you can cause people to undertake their own development. That is by education and leadership. Through these means- and no other- people can be helped to understand both their own needs and the things they can do to satisfy these needs (Nyerere 1973).” In the socialist regime of Tanzania, the development needed for the country to expand started from within the individual.

Citizens needed to understand the philosophy of African socialism in order to accept the obligation of finding Tanzanian answers to Tanzanian problems. Through this endeavor, the ideology and practices of the government were more ingrained into the daily lives of the people.

Ethnicity. In this study, the ethnic agreement dimension was thought to either promote or hinder participation, be constructive or destructive to the building of a civil society within the respective country, bringing unity or disunity and increased hostilities. The fragility of nations such as Nigeria's federation and the violent civil unrests of Kenya in '07/'08 and the Ivory Coast in '10/'11 are all tied to ethnic strife typically dating to colonial strategies for rule. From the opposite perspective, attempting to establish civil society in an environment not hospitable to the new structure, it may undermine, "traditional but time-tested modes of interest articulation and aggregation (tribes, clientelist relations, caste associations, ethnic coteries), leaving societies with the worst of all possible worlds: old interest associations undermined before the newer civil society ones have had a chance to take root" (Wiarda, 2003). If participation is a needed factor in successful strengthening of local government in democracies and civil society is a rather new major outlet through which the participation occurs, its relationship with those pre-existing conditions and how citizenry had viewed them is important.

The positive relationship in Uganda was expected for the country. In Uganda, there is still a palpable rift between the historically, financially dominant ethnicity, Buganda and the President of 30 years. In 2010, the burning of the Buganda Kingdom's Royal Tombs created a tumultuous environment for the President (Conroy-Krutz and Logan, 2013). As this researcher can personally attest having been for the burnings and a witness to previous riots, there is little goodwill between the national government and the Buganda Kingdom. Therefore, a positive

relationship between a strong identification with ethnicity and organization membership may threaten stability.

In terms of Tanzania's lack of relationship, even though the Nyerere's socialist fiscal programs failed badly, Ujamaa was capable of repairing the indigenous and religious splits present at the country's founding (Bjerk, 2010). Mwasa and Ndulu (2008) found that Nyerere's unification of the 133 tribes under one nation continues to be praised for keeping much of the peace and security of the nation. For instance, Swahili was used under Ujamaa and still used today as the one language to be used across the country in education and government, allowing citizens to communicate with any other citizen in the country. This is in contrast from Kenya and especially Uganda where language is associated with tribes and some tribes hold more power than others (eg. Bugandans using Luganda in Uganda; see Alexander, 2007).

Political Affiliation. Whether a citizen's political allegiances align with that of public officials had a significant positive relationship across all populations in the study. The results support political party affiliation of not just the citizen, but the local government head and the central government can be connected to their relationships with one another as the issues which they discuss and work on already have a broad stance on the subject because of the political party. Authors, such as Stokes (2007), have found strong political parties can become ingrained into society and can control some decision-making of the citizenry. In most of the nations covered here and the broader sub-Saharan Africa, one political party is synonymous with the government. Norris and Mattes (2013) offered the belief originating with Horowitz (1985,1991, 1993) that ethnic identification directs party affiliation and voting behavior over the years, reinforced by those of the same ethnicity already connected to the party.

Public Perceptions and Public Relationships

Confidence. Confidence in public officials resulted in significant positive relationships in Ghana and Tanzania but not the Uganda case. Jreisat, 2002 determined six widely accepted experiences of developing countries: real development comes from a firm understanding of “local political, administrative, and economic realities,” “Development process is qualitatively enhanced when public decisions are transparent and when the accountability of public officials and institutions are affirmed,” “The process of development faces the continuing challenge of transforming institutions and cultures to embody efficiency, orderliness, and rational decision making.” (p. 113).

Citizen participation in both the democratic government and the community are important for a country to remain healthy, but even more important for an area still trying to develop. The results of the regression showed that these hypotheses regarding the relationships confidence and participation have with public officials did not hold in Uganda. However, measurements of these independent variables are still being debated in several fields of academia and perhaps, those used for the Afrobarometer survey are inaccurate. The positive relationship between problems in government and participation in community organizations shows a possible tendency for citizens to be pro-active when they witness faults in districts. An optimistic outlook may be encouraged by a local government who lets the citizenry know that they are trying to listen. Understanding the relationship, the government and the non-profit sector have with one another via the citizenry is not fully answered in this study. The hope is that future research will lead to more clarification.

Corruption. In every dataset, the corruption dimension of the analysis had a surprising positive relationship with the levels of participation. Corruption may be endemic as stated by

Bracking (2007, p. 9), but it does not appear to be associated with participation negatively.

Additionally, there is the counterargument to the original hypothesis, which is supported by Ekeh (1975), that corruption defined by the West is not seen as a negative by citizens in developing nations of Sub-Saharan Africa. The argument being, government officials who use their position for the betterment of their family and their local area is simply using the foreign, Western institutions to support the indigenous institutions. The positive view of corruption would explain these unexpected results from all datasets.

In terms of citizen trust and confidence in local government officials, as it relates to the corruption dimension, if a government official is abusing his position for the betterment of the primordial public, which may include national level positions, then the citizenry may not disapprove and a decrease in trust may not occur.¹⁰ For civil society, as an outlet for participation, it is unclear if the placement is in the primordial public; however, it cannot fully fall within the civic. Just as the primordial public is the alternative to the formalized governmental state created in the auspices of Western control, so too is civil society (Osaghae, 2006). As discussed, if an individual citizen lacks confidence in local government, they potentially shift toward the service alternatives viewed more capable of addressing local demands. The hypothesis regarding corruption does assume that a rise in government abuse will result in less participation in community affairs; however, based on the roles of the two publics and civil society's dubious position between them, the research suggest the relationship could go either way, as corruption could be perceived by the citizen as good or bad depending on who the

¹⁰ These dimensions were likely to have crossover in the factors.

public official is helping. A return to the correlations which created the respective participation indexes is needed.

Generally, the heaviest variables were focused around group involvement not directly addressing government officials. Taking into account the associations, along with the relationship found in the results between views on/experience with corruption and what formed the participation index, an argument can be defended through exit/voice scholars, like Azarya (1988). Reaching back to the study's civil society sections, citizens who believe or perceive the government structure as lacking local legitimacy or simply not receptive to local opinions will recede to other outlets like community groups to help independently to solve local problems and push said government officials to acknowledge a need for the solutions. As previously defined, participation is all action in the public space for local decision making, not just the actions taken incorporating public officials. Citizens who see and experience the corruption in the government's political and bureaucratic institutions will seek to join more effective actors. Additionally, citizens may see corruption, select other outlets for participation, and then participate politically around election time to help unseat the corrupt officials. In sum, corruption may have a positive and significant relationship with participation, but not necessarily have participation benefiting the legitimacy of the corrupt government officials.

Lastly, the unexpected relationships between corruption and participation may be the result of participation being an act of corruption so that one action impacts the answers for multiple questions in the Afrobarometer survey. For instance, in the participation dimension questions regarding contact with public officials are included, while the corruption dimension involves the payment of bribes for services. Though the questions from the respective

dimensions did not correlate in the other, it is possible the action of paying the bribe is related to the action of contacting the public officials.

Authority. The most basic argument behind decentralization's promotion of participation is that by bringing decision-making affecting a local population, ranging from taxes and expenditures to the political leaders themselves, down to the local population compels more citizens to spend more time participating and more time listening by officials to affect these choices (Shah, 1998). The strategy means to bring the potential empowerment of local citizenries to their highest levels of participation. Delving more into the details of local government's relationship with participation, Manor (1996) found the institutional advancements from promoting local government in the forms of more accountability mechanisms, cohesive connections of the society and the government from a closer set of government officials transmitting and receiving information (cited in Shah, 1998). Referring to past discussion, these are all conditions outlined by Mullins (2004) as the factors needed for effective participation.

While every national database was found to have a positive relationship between Authority and Participation, Uganda most unexpectedly exemplifies the relationship. Uganda's path to democratic decentralization has struggled in the area of authority and human capacity. The proliferation of districts (spatial decentralization) was believed to continue to reduce the capacity of sub-national units as experienced staff were continuously spread into new local government systems. The impact of district inflation was crucial to the comprehension of why the decentralization process is unsuccessful in terms of efficiencies even though public officials closer to the citizenry. A country the size of the US state of Oregon now 132 districts and the special district of Kampala (each with five levels of councilors) has hindered local government's control by thinning out local human capacity. It should be made clear that there is no empirical

evidence that the increase in districts have resulted in accomplishing the goals originally dictated by the national government in the areas of alleviating ethnic strife, reduction in poverty, or more efficient service delivery (Mwenda, 2010; Green, 2010). Instead, new districts are a form of pork spending in Uganda, as local government jobs comprise three-fourths of the government continuously reducing the opportunity for the districts to have a full, qualified staff (Okidi and Goluba, 2008; Lambright, 2011). Therefore, even when some vacancies are filled by capable employees, the district is unable to take full advantage of the qualifications, as they need the staff to juggle several other positions. However, though administrative units may be thinned out in terms of qualification, Uganda's local political officials do possibly appear to benefit being closer and closer to the citizenry. For those surveyed who saw responsibility and accountability in public officials are more likely to have higher levels of participation.

Additionally, the levels of education, coupled with the vast number of local government jobs (75% of public jobs in Uganda are local government (Okidi and Goluba, 2008)), emphasizes the need not just for more training but help from the citizenry. The impact of SNG incapacity is a important factor when dealing with failures in the voter-based, local decision-making process and how a government closer to the "people" may not lead to more efficiency. As previously discussed, a lack of SNG capacity should encourage local officials to seek help from the citizenry and in doing so will promote citizen buy-in, institutional development of local governments, and more efficient services.

Approval. Only Uganda was concluded as having a significant positive relationship between citizens' approval of government services and their levels of participation. As previously discussed in the disengagement literature, when administrations are insufficient, the citizenry will shift their efforts from government to more community-based organizations who

can be effective with their donated time (Azarya, 1988). The disconnect between the public and local government results in an increase in non-governmental organizations' participation. The donor pushes for community members to come to solve particular issues outside the government's authority is, again, thought to alienate district officials (Okidi and Goluba, 2008). By focusing solely on economic development, instead of incorporating political sustainability, NGOs can enhance the living standards of an area and lower the responsiveness of district government. The lack of "governance," in terms of private-public government network-based project implementation, results in the expanding gap between public participation and district government operations. Further analysis would be required to fully explain this non-relationship in the country's data.

Fair Treatment. All of the country samples, except Ghana, appear to have significant positive relationships between how citizens believe they, their peers, and officials are treated and their levels of participation. Observing specific cases dealing with developing nations, Dauda (2006) found Uganda's mandatory representation of women in the percentage of leaders they have at the local level and positions they hold to promote participation by this otherwise marginalized population. Shifting outside Africa, in India, there has been an increase in participation of women and women-focused public services with a mandatory percentage of representation going to women (Mullins, 2004; Chattopadhyay and Duflo 2001; see Bardhan 2002). While it is potentially possible for men to have adequately represented this population, government's acknowledgement that these constituencies (women discussed here, but also others such as youths and the disabled) have a voice needed for the promotion of the proper level and selection of public services by selecting individuals directly from these populations highlights the necessity of their involvement in ongoing stability. Regardless of the nation's level of

development, higher levels of local participation result in higher levels of local service delivery (Mullins, 2004).

Of the datasets and regressions presented in this study, Tanzania, with its socialist past, represents a unique relationship between views of fair treatment and participation compared to the other countries in the model. Looking at other nations which have experienced socialism help to better articulate why and how Tanzania continues to maintain peace and stability despite the influx of new acquisitions of natural resources. In a number of former soviet countries, the ethnic cleavages were oppressed during the socialist regimes and only after the fall of socialism did they begin to regain their prominence (Verdery 1999). However, nothing of this sort has occurred in Tanzania with the push toward more liberal, capitalist policies. The purpose of socialism for Nyerere was not to bring about revolution from a capitalist era like that in Eastern Europe, but instead to bring Tanzania back to a natural state of equality and community he believed existed before the presence of colonials. In an argument for Nyerere's appeal toward fundamental equality, Mesaki and Malipula quote the former leader as saying, "we want to create a socialist society which is based on three principles: equality and respect for human dignity; sharing of the resources which are produced by our efforts; work by everyone and exploitation by none" (Nyerere 1967; cited in 2011). Despite the dramatization, the argument regarding Tanzania's peace being a byproduct of genuine national allegiance held by the citizenry is still valid, as literature mostly skips over this idea and focuses more on the economic transition.

Chapter 5: Conclusions and Moving Forward

Decentralization has dominated the strategies of international development since the 1980s. Instead of focusing on building the strength and power of central governments, experts promoted moving decision-making to the lower levels of government so that officials have a better understanding of problems through engagement and participation from the public. The benefits of decentralization include allocative and productive efficiency. This broad strategy now occupies the development plans of over 75 countries.

Though decentralization is now ingrained in the World Bank and UNDP policy, the implementation of the strategy consistently overlooks the local demographics and population dynamics. These dimensions may help or hinder the level of participation from the public necessary to promote the potential positives of moving powers from central to local levels in voter-based systems. This study utilized the literature, factor analysis, and regressions to try to clarify the roles these under-addressed variables have in the inducement of participation from the citizenry at the local level in areas with a decentralized structure. The study incorporated dimensions from multiple scholars in an attempt to understand all facets of the citizen's environment and characteristics which may be related to participation. The results, however, were varied.

Of the fifteen variables, only seven were consistently significant across all the datasets, and only four of those followed the expected direction of the relationship. The results of the OLS regression produced a number of questions while only giving clarity to four originally. The above literature on the dimensions of the institutions, the individual, their perceptions, and their relationships would suggest these factors' effects on public participation are still ambiguous in Sub-Saharan Africa.

A growing amount of evidence, including the results here, shows that strategic focus on local level officials and populations may lead to questionable levels of participation and potentially inadequate, local-level administrations, if handled poorly (Kakumba 2010; Green, 2010). The risks undermine the international and central intentions to increase on-the-ground local input. To this point, disengaged local populations contribute to these ill-equipped, local-level administrations (Kakumba 2010; Green, 2010). However, rarely are the influences on local populations' decision to participate or to disengage from their local government acknowledged by central government officials or discussed by development experts. Better understanding what causes citizens to have a varying level of disconnect will allow for corrections to be made and more effective development strategies to enhance local representation to be created in the future. Thus, the primary focus of the present research was how local (both endogenous and stemming from central government) characteristics impact an individual's connections (participation) with the government.

The wide-ranging unexpected results suggests, more is included in the decision to participate than what has been expressed in the study. Though motivations for becoming an actor in the public space, it did not cover interactions between non-government actors within that space and the individuals interacting within an actor or CSO. Organization theory in America can help steer this future research. Jung and Lake (2011) presents a meticulous representation of how self-interested agents may interact with one another in an unregulated space and descriptions of the structures they potentially adopt in order to preserve their respective organization. Simplifying the study's conclusions, the network benefit of information exchange will eventually fall below the cost of time and money to participate in the network, resulting in the actor removing itself from the structure.

The purpose of future research would be to explore the broader scope of how perceptions/experiences of local council's and central policy's impact involvement in the public space. The Afrobarometer has recently completed a sixth round of surveys including the 11 original countries. Breaking "decentralized" countries down to their respective local authorities, a time-series analysis could be done to better understand the causal relationship local government has on participation's various aspects or if the reverse is true.

The new additional insights, which may explain the results, does not have a quantifiable measurement presently available. Instead, a qualitative study in four Ugandan districts has been designed for future studies. Granted funding and time, the qualitative study will differentiate causes of local mobilization via organizations in respects to views of and interactions with local government and each other. The research design proposes focus groups and surveys of citizens and interviews with district and community leaders. Guided by the extensive quantitative analysis and factor correlations presented in this study, the thick analysis on the ground will create a comprehensive understanding of how/why communities interact with local government officials and each other will form.

ANNEX

ALL NATIONS

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|-------|---------|---------|---------|----------------|
| Pfinvolvement | 16799 | -2.00 | 1.61 | -.0578 | .87929 |
| FiscalPower | 16799 | -2.14 | 2.28 | -.0032 | .91148 |
| Participation | 16799 | -1.61 | 3.96 | -.0247 | .89734 |
| FairTreatment | 16799 | -1.76 | 3.03 | -.0111 | .89449 |
| Corruption | 16799 | -1.96 | 3.67 | -.0257 | .89907 |
| Confidence | 16799 | -2.25 | 1.64 | .0072 | .93574 |
| Authority | 16799 | -1.56 | 2.16 | -.0270 | .93537 |
| Approval | 16799 | -2.00 | 2.80 | .0001 | .91596 |
| Q1 Age | 16611 | 18 | 105 | 36.35 | 14.280 |
| Q101 Gender | 16799 | 1 | 2 | 1.50 | .500 |
| Q97 Education | 16772 | 0 | 9 | 3.16 | 1.923 |
| LGRRev | 6712 | .56 | 57.97 | 10.6227 | 13.05437 |
| SNUEthnicity | 7200 | 1 | 3 | 2.52 | .754 |
| PartyAgree | 7200 | 0 | 1 | .44 | .496 |
| spatial | 12472 | -.80 | 7.08 | -.2174 | 1.09321 |
| strength | 6944 | .11 | 2.39 | .9113 | .38825 |
| PolDec | 6344 | -1.91 | 2.25 | -.3695 | .61380 |
| Valid N (listwise) | 2236 | | | | |

UGANDA

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|------|---------|---------|--------|----------------|
| Pfinvolvement | 2400 | -1.33 | 2.27 | -.0092 | .82685 |
| FiscalPower | 2400 | -1.38 | 3.06 | .0105 | .89487 |
| Participation | 2400 | -1.72 | 3.02 | -.0488 | .90039 |
| FairTreatment | 2400 | -2.57 | 2.58 | -.0871 | .86346 |
| Corruption | 2400 | -2.33 | 3.57 | -.0742 | .84734 |
| Confidence | 2400 | -2.32 | 2.19 | .0178 | .93148 |
| Authority | 2400 | -2.18 | 2.01 | -.1134 | .91996 |
| Approval | 2400 | -2.16 | 3.57 | -.0129 | .92174 |
| Q1 Age | 2381 | 18 | 84 | 35.18 | 12.809 |
| Q97 Education | 2399 | 0 | 9 | 3.28 | 1.859 |
| Q101 Gender | 2400 | 1 | 2 | 1.50 | .500 |
| SNUEthnicity | 2400 | 1 | 3 | 2.66 | .750 |
| PartyAgree | 2400 | 0 | 1 | .38 | .486 |
| LGREV | 2256 | .56 | 7.54 | 1.9921 | 1.39879 |
| Spatial | 2400 | -.77 | 3.93 | -.2167 | 1.07400 |
| Strength | 2400 | .11 | 1.87 | .7480 | .27432 |
| PolDec | 2400 | -1.28 | 3.35 | -.1775 | .81194 |
| Valid N (listwise) | 2236 | | | | |

GHANA

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|------|---------|---------|---------|----------------|
| Pfinvolvement | 2400 | -2.83 | 1.17 | -.0694 | .88480 |
| FiscalPower | 2400 | -2.37 | 2.29 | -.0423 | .90662 |
| Participation | 2400 | -1.21 | 4.53 | .0050 | .90725 |
| FairTreatment | 2400 | -1.56 | 3.05 | .0258 | .89086 |
| Corruption | 2400 | -2.30 | 3.09 | .0937 | .92050 |
| Confidence | 2400 | -2.00 | 2.08 | .0079 | .94213 |
| Authority | 2400 | -1.06 | 3.35 | .0647 | .93875 |
| Approval | 2400 | -1.97 | 2.28 | .0051 | .97274 |
| Q1 Age | 2399 | 18 | 100 | 37.31 | 15.404 |
| Q97 Education | 2397 | 0 | 9 | 2.95 | 2.006 |
| Q101 Gender | 2400 | 1 | 2 | 1.50 | .500 |
| SNUEthnicity | 2400 | 1 | 3 | 2.57 | .752 |
| PartyAgree | 2400 | 0 | 1 | .36 | .479 |
| LGRev | 2400 | .71 | 57.97 | 19.9818 | 16.80931 |
| spatial | 2392 | -.96 | 4.27 | -.2231 | 1.11789 |
| Valid N (listwise) | 2388 | | | | |

TANZANIA

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|------|---------|---------|--------|----------------|
| Pfinvolvement | 2400 | -1.27 | 2.17 | -.0607 | .84107 |
| FiscalPower | 2400 | -1.73 | 3.00 | -.0086 | .90323 |
| Participation | 2400 | -1.80 | 3.39 | -.0111 | .90833 |
| FairTreatment | 2400 | -1.87 | 3.22 | -.0478 | .88396 |
| Corruption | 2400 | -2.04 | 3.81 | -.1085 | .88321 |
| Confidence | 2400 | -2.78 | 1.85 | .0179 | .94282 |
| Authority | 2400 | -1.61 | 2.00 | .0324 | .94980 |
| Approval | 2400 | -1.99 | 3.20 | .0232 | .95261 |
| Q1 Age | 2398 | 18 | 99 | 38.60 | 14.312 |
| Q97 Education | 2400 | 0 | 9 | 3.01 | 1.392 |
| Q101 Gender | 2400 | 1 | 2 | 1.50 | .500 |
| SNUEthnicity | 2400 | 1 | 3 | 2.34 | .724 |
| PartyAgree | 2400 | 0 | 1 | .58 | .493 |
| LGRev | 2056 | 1.02 | 30.41 | 9.1677 | 6.19204 |
| spatial | 2392 | -.63 | 5.78 | -.1805 | 1.05889 |
| Valid N (listwise) | 2046 | | | | |

| ALL | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| EA_FAC_B_1 | -0.0483 | 0.1274 | 0.003 | -0.0197 | 0.0396 | -0.013 | 0.1246 | 0.0736 | 0.0288 | 0.0156 | -0.1489 | -0.0119 | -0.0312 | -0.0087 | 0.0911 | 0.0971 | 0.445 | 0.0552 | -0.1116 | -0.0094 | 0.7189 |
| EA_FAC_C_1 | 0.0289 | 0.084 | 0.0622 | -0.0215 | 0.069 | 0.003 | -0.0062 | 0.0253 | -0.0826 | 0.1022 | -0.0249 | 0.0563 | -0.0086 | -0.0996 | -0.0382 | -0.2173 | 0.6305 | 0.0428 | 0.2344 | 0.1311 | 0.4973 |
| EA_FAC_D_1 | -0.1002 | -0.0661 | -0.0135 | -0.0559 | 0.0635 | -0.0458 | 0.0711 | -0.0234 | -0.0486 | 0.1445 | 0.0135 | 0.0838 | 0.0796 | -0.0398 | 0.0499 | 0.1166 | 0.7227 | -0.0307 | 0.0141 | 0.0531 | 0.4973 |
| EA_FAC_E_1 | -0.0435 | -0.0257 | 0.1215 | -0.0773 | -0.0288 | -0.0077 | 0.0175 | 0.0233 | -0.1527 | -0.1153 | -0.0266 | 0.1053 | 0.0697 | 0.1194 | 0.0185 | 0.0369 | 0.5792 | -0.0333 | -0.0103 | -0.0443 | 0.5414 |
| EA_ROAD_1 | -0.0283 | -0.1082 | 0.2973 | -0.0119 | 0.0009 | -0.0262 | -0.0142 | 0.154 | -0.007 | -0.1348 | 0.004 | -0.0298 | -0.0313 | -0.2181 | -0.0205 | 0.0361 | 0.185 | 0.05 | 0.3847 | 0.0194 | 0.6495 |
| EA_SEC_A_1 | -0.0377 | -0.0342 | 0.2313 | 0.0224 | -0.0944 | 0.016 | -0.0423 | 0.1515 | 0.0354 | 0.0359 | 0.017 | 0.105 | -0.0735 | 0.0849 | -0.1375 | -0.2123 | 0.3181 | 0.0335 | 0.3102 | 0.2281 | 0.6039 |
| EA_SEC_B_1 | -0.0281 | -0.0158 | -0.0025 | -0.0107 | -0.0848 | -0.0397 | 0.0772 | 0.2131 | -0.0377 | 0.0769 | 0.1877 | 0.0641 | 0.0236 | 0.0051 | -0.0609 | -0.196 | 0.1724 | 0.0551 | 0.2531 | 0.2507 | 0.7583 |
| EA_SEC_C_1 | 0.043 | -0.0835 | 0.0894 | 0.0456 | 0.0379 | 0.1141 | -0.1373 | 0.1018 | 0.1569 | -0.0061 | -0.1148 | 0.0011 | 0.1632 | 0.1102 | -0.0014 | -0.0435 | 0.0976 | -0.0236 | 0.0808 | 0.5433 | 0.6903 |
| EA_SEC_D_1 | 0.0541 | 0.0244 | 0.2121 | 0.1291 | -0.1093 | 0.1333 | -0.0965 | 0.0397 | 0.1342 | -0.0875 | -0.0069 | 0.0305 | 0.0981 | 0.0675 | -0.0696 | -0.0494 | 0.0415 | -0.0141 | 0.0583 | 0.545 | 0.6903 |
| EA_SEC_E_1 | 0.0473 | -0.0403 | -0.0309 | 0.0139 | 0.0176 | 0.0434 | 0.0474 | -0.0399 | 0.0609 | 0.0193 | 0.0436 | 0.0491 | 0.1411 | 0.0476 | -0.1282 | -0.1006 | 0.1518 | -0.0887 | 0.0651 | 0.2872 | 0.8724 |
| EA_SVC_A_1 | 0.0282 | 0.0447 | 0.4839 | -0.0647 | -0.0561 | 0.0053 | -0.1525 | 0.0811 | -0.0307 | -0.0794 | -0.0921 | -0.215 | 0.0162 | 0.0006 | -0.0382 | -0.0084 | 0.3013 | 0.0334 | 0.1827 | -0.0835 | 0.4481 |
| EA_SVC_B_1 | -0.0055 | 0.0529 | 0.5213 | -0.0308 | -0.0284 | -0.0517 | -0.1055 | 0.0142 | 0.0093 | -0.0567 | -0.0038 | -0.1797 | 0.0686 | 0.0543 | -0.0309 | 0.1209 | 0.1742 | -0.0454 | 0.4396 | 0.0971 | 0.511 |
| EA_SVC_C_1 | -0.0335 | -0.0288 | 0.4465 | -0.1664 | -0.194 | -0.0344 | -0.0741 | -0.0452 | -0.0019 | -0.0082 | -0.0001 | -0.1787 | 0.0712 | 0.0217 | 0.1347 | 0.1679 | 0.2235 | 0.0003 | 0.4673 | 0.1203 | 0.5101 |
| EA_SVC_D_1 | 0.0849 | -0.1022 | 0.1883 | -0.1144 | -0.0192 | 0.05 | -0.1576 | 0.1275 | -0.101 | -0.163 | -0.0065 | 0.0643 | 0.1391 | 0.0766 | -0.2014 | 0.101 | 0.2311 | -0.0305 | -0.0442 | -0.0073 | 0.6473 |
| Q1_1 | -0.0637 | -0.1546 | -0.1634 | 0.0581 | -0.1402 | -0.0468 | 0.2277 | 0.0469 | -0.0356 | -0.0509 | 0.0569 | -0.1013 | 0.2603 | -0.0452 | -0.1598 | 0.0125 | -0.0159 | 0.1757 | -0.1471 | 0.0815 | 0.6999 |
| Q101_1 | -0.0054 | -0.0551 | -0.0439 | -0.0016 | -0.1059 | 0.0183 | -0.38 | 0.0455 | -0.0935 | -0.0524 | 0.0053 | -0.1001 | -0.0471 | -0.0164 | 0.1151 | -0.0853 | -0.0542 | -0.0417 | 0.1568 | -0.0594 | 0.7827 |
| Q104_1 | -0.0981 | -0.0304 | -0.0465 | -0.1286 | -0.0254 | -0.0163 | 0.0067 | 0.2714 | 0.1 | -0.1715 | -0.0617 | -0.0436 | -0.0358 | -0.0532 | -0.0408 | 0.2047 | 0.0502 | -0.0606 | 0.1362 | 0.2412 | 0.7557 |
| Q105_1 | -0.0023 | 0.1682 | -0.1418 | 0.0418 | 0.2771 | -0.2082 | 0.1595 | -0.0252 | 0.0312 | 0.036 | 0.0606 | 0.05 | 0.0011 | -0.0372 | -0.135 | 0.085 | 0.0805 | 0.087 | 0.1441 | 0.0895 | 0.7622 |
| Q10A_1 | -0.1034 | 0.0887 | 0.0637 | -0.0412 | 0.1192 | -0.0217 | 0.0847 | 0.0698 | -0.2079 | -0.1219 | 0.0951 | 0.0023 | 0.0608 | -0.0075 | 0.0435 | -0.0246 | -0.0942 | 0.0281 | 0.1123 | -0.0605 | 0.843 |
| Q10B_1 | -0.1335 | 0.056 | -0.0892 | -0.0032 | 0.0351 | 0.2726 | -0.0421 | -0.0193 | -0.0756 | 0.0136 | 0.1563 | -0.0264 | 0.1332 | 0.0043 | -0.0128 | 0.1659 | 0.0239 | 0.0695 | -0.0557 | -0.0311 | 0.78 |
| Q10C_1 | 0.0698 | -0.0119 | 0.2294 | 0.0835 | -0.036 | 0.0097 | 0.1419 | -0.0428 | -0.0272 | -0.0696 | 0.1132 | -0.0194 | 0.0037 | 0.0294 | -0.0316 | -0.1958 | 0.0886 | 0.0706 | 0.0583 | -0.0502 | 0.8317 |
| Q13A_1 | 0.0645 | -0.0148 | 0.2174 | -0.0265 | -0.0945 | -0.0282 | 0.1569 | -0.106 | 0.0803 | -0.0084 | 0.0474 | 0.0582 | 0.0977 | 0.0341 | -0.067 | 0.171 | -0.0711 | -0.1899 | -0.1413 | 0.0031 | 0.7689 |
| Q13B_1 | 0.0151 | 0.0821 | 0.6839 | -0.0702 | 0.1154 | -0.0164 | -0.0014 | 0.0442 | 0.0428 | -0.0257 | -0.0839 | -0.1105 | -0.0262 | -0.1289 | -0.1237 | 0.0519 | 0.0555 | 0.0125 | 0.2191 | -0.0447 | 0.4244 |
| Q13C_1 | 0.0314 | 0.0451 | 0.6826 | 0.0358 | -0.0336 | -0.0423 | 0.0983 | -0.113 | -0.1104 | -0.1163 | -0.0924 | 0.0413 | 0.0276 | -0.0049 | 0.0097 | -0.06 | 0.0095 | 0.0443 | 0.0977 | -0.0795 | 0.4978 |
| Q13D_1 | -0.0068 | 0.05 | 0.7159 | 0.0374 | 0.0925 | 0.0687 | -0.0616 | -0.0084 | 0.0332 | 0.046 | -0.0638 | 0.0085 | -0.1639 | 0.0116 | 0.0844 | 0.0241 | -0.0118 | 0.0654 | -0.0017 | 0.0979 | 0.4468 |
| Q14_1 | 0.018 | 0.0206 | 0.1014 | 0.193 | 0.0361 | -0.1319 | 0.3876 | 0.0118 | 0.1359 | -0.0163 | -0.0436 | -0.0243 | -0.025 | 0.0126 | -0.0281 | -0.0168 | 0.1055 | 0.0502 | 0.0373 | -0.2011 | 0.6902 |
| Q15_1 | 0.0201 | 0.0146 | 0.1316 | 0.0584 | 0.0488 | -0.0549 | 0.5124 | 0.0886 | 0.1279 | 0.0066 | 0.09 | 0.08 | -0.0801 | 0.0267 | -0.1631 | 0.067 | 0.1513 | -0.036 | 0.0031 | -0.2223 | 0.5896 |
| Q16_1 | 0.1339 | 0.0335 | 0.0136 | -0.0629 | 0.063 | -0.1207 | 0.108 | -0.1101 | -0.127 | -0.0943 | -0.0282 | 0.0649 | -0.0121 | -0.1188 | -0.0706 | 0.1412 | 0.0629 | -0.0431 | 0.0308 | -0.1571 | 0.8819 |
| Q17A_1 | 0.0005 | -0.179 | -0.0483 | 0.2556 | -0.0091 | 0.0455 | 0.0587 | -0.0095 | 0.0031 | -0.1042 | -0.238 | -0.172 | 0.0982 | 0.0671 | 0.0697 | 0.0136 | -0.0657 | -0.1299 | 0.0866 | 0.0563 | 0.7052 |
| Q17B_1 | -0.0305 | -0.0755 | -0.1456 | 0.1547 | 0.2117 | -0.2186 | 0.0907 | 0.1383 | 0.1084 | -0.0416 | -0.1421 | -0.1822 | 0.1363 | 0.1738 | -0.0128 | 0.0357 | -0.061 | -0.0674 | 0.2047 | -0.091 | 0.5793 |
| Q17C_1 | 0.0701 | -0.0303 | 0.0324 | 0.1201 | 0.1965 | -0.0452 | 0.095 | 0.1669 | 0.026 | -0.0933 | -0.1666 | -0.2685 | 0.0683 | 0.0185 | 0.0882 | -0.0368 | -0.0985 | -0.0489 | 0.1174 | 0.0341 | 0.6532 |
| Q18_1 | 0.0533 | 0.0381 | 0.0721 | -0.0759 | 0.0515 | 0.0926 | 0.021 | 0.2331 | -0.1132 | -0.0647 | 0.0823 | -0.0518 | 0.1822 | -0.0439 | 0.1566 | -0.0101 | -0.2024 | -0.0171 | -0.0889 | 0.1543 | 0.7234 |
| Q19_1 | -0.0806 | 0.031 | 0.0067 | -0.0606 | -0.008 | -0.1456 | 0.243 | 0.1056 | -0.0138 | 0.0815 | 0.0154 | 0.1478 | -0.0097 | -0.038 | -0.0253 | -0.0264 | -0.0146 | -0.0758 | -0.0068 | 0.1434 | 0.8199 |
| Q20_1 | 0.0274 | 0.044 | 0.0655 | -0.0478 | 0.2409 | 0.0498 | 0.1205 | 0.0114 | -0.1598 | -0.048 | 0.0853 | -0.2514 | 0.0067 | 0.0572 | -0.0845 | 0.0795 | -0.1572 | -0.0033 | -0.0188 | -0.054 | 0.7633 |
| Q21_1 | 0.0616 | -0.1276 | 0.0458 | -0.2032 | 0.0581 | -0.0147 | 0.1286 | -0.0415 | -0.0064 | -0.0005 | 0.0164 | 0.0661 | 0.1713 | 0.0778 | 0.1173 | -0.0383 | 0.0202 | -0.1657 | 0.0685 | 0.1403 | 0.8148 |
| Q22_1 | 0.116 | 0.0194 | 0.1488 | -0.0879 | 0.0492 | -0.0191 | 0.0218 | 0.0978 | 0.0038 | -0.1518 | -0.0453 | 0.0226 | 0.0412 | -0.0987 | 0.2701 | -0.116 | -0.13 | 0.0844 | -0.061 | -0.0816 | 0.7382 |
| Q23_1 | -0.0592 | -0.0417 | -0.0496 | -0.0599 | 0.2172 | -0.0527 | 0.0665 | 0.0087 | 0.0952 | 0.0633 | 0.2163 | 0.0514 | -0.0069 | -0.0513 | -0.5714 | 0.0746 | -0.0371 | -0.141 | 0.0274 | 0.0582 | 0.6506 |
| Q24_1 | 0.0611 | 0.0037 | 0.157 | -0.1029 | 0.125 | -0.0263 | 0.0304 | 0.0888 | 0.02 | -0.1487 | -0.0484 | 0.0515 | 0.0171 | -0.0511 | 0.3187 | 0.0203 | -0.2005 | 0.0625 | -0.0643 | -0.0045 | 0.7207 |
| Q25A_1 | 0.0283 | -0.0079 | -0.0638 | 0.0714 | -0.0108 | 0.103 | 0.3453 | 0.093 | -0.1322 | -0.0926 | 0.0217 | -0.2069 | 0.0361 | 0.082 | 0.1144 | -0.002 | 0.0841 | 0.0786 | -0.0605 | 0.0595 | 0.7595 |
| Q25B_1 | 0.1727 | 0.071 | -0.1303 | -0.1198 | -0.0045 | 0.0718 | 0.479 | 0.0528 | -0.0236 | 0.0069 | 0.0534 | -0.2148 | 0.0578 | 0.0503 | 0.1201 | 0.086 | -0.043 | 0.0458 | -0.0445 | 0.0668 | 0.6653 |
| Q26A_1 | 0.1805 | 0.0443 | -0.1157 | -0.0909 | 0.0595 | 0.0042 | 0.6596 | 0.0314 | -0.1112 | -0.1057 | -0.0171 | -0.0565 | -0.1344 | -0.0128 | 0.0022 | 0.015 | 0.0435 | 0.0565 | -0.1153 | 0.1278 | 0.5167 |
| Q26B_1 | 0.1471 | 0.1194 | -0.0181 | -0.0343 | 0.046 | 0.0376 | 0.594 | -0.02 | -0.0509 | -0.0374 | 0.0478 | -0.0411 | -0.09 | 0.0219 | -0.0184 | -0.0706 | 0.0348 | 0.1023 | -0.1378 | 0.1106 | 0.5921 |
| Q26C_1 | 0.0317 | -0.0447 | 0.1376 | -0.1021 | -0.0638 | 0.1635 | 0.1997 | -0.1801 | -0.0382 | 0.1101 | 0.1246 | -0.1771 | -0.1306 | 0.096 | -0.127 | 0.1999 | -0.0499 | 0.0236 | 0.1485 | 0.0595 | 0.6953 |
| Q26D_1 | -0.0152 | -0.0705 | 0.1819 | 0.0214 | 0.0788 | 0.2373 | 0.3162 | -0.2323 | 0.0682 | 0.0183 | 0.0535 | -0.0782 | -0.1461 | 0.0391 | 0.0422 | 0.3075 | -0.0691 | -0.0358 | 0.1093 | -0.1018 | 0.6341 |
| Q26E_1 | -0.0145 | -0.1156 | -0.0156 | 0.0142 | -0.0517 | 0.3183 | 0.2491 | -0.2245 | 0.1461 | 0.1138 | 0.0123 | -0.0315 | -0.1331 | -0.0146 | -0.1097 | 0.2124 | -0.052 | 0.1197 | 0.1628 | -0.055 | 0.5475 |

| ALL | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q27_1 | -0.0545 | 0.0106 | -0.04 | 0.0824 | -0.11 | -0.0921 | 0.2118 | -0.0594 | 0.0865 | -0.05 | -0.0912 | 0.0478 | 0.0531 | -0.0451 | -0.1898 | 0.0179 | -0.0303 | -0.041 | -0.2323 | 0.1175 | 0.7871 |
| Q28_1 | -0.1316 | 0.0428 | -0.0907 | 0.192 | 0.2648 | -0.0705 | -0.0853 | 0.0054 | -0.1089 | 0.2493 | -0.1185 | -0.2916 | -0.037 | -0.0903 | -0.0055 | -0.0228 | 0.0852 | -0.087 | 0.0457 | 0.1379 | 0.5949 |
| Q29A_1 | 0.0586 | 0.0959 | -0.2182 | -0.0311 | -0.0024 | -0.0697 | 0.5026 | 0.0308 | 0.0428 | -0.0097 | 0.0892 | 0.0626 | -0.0083 | 0.1498 | 0.1063 | -0.1018 | 0.0661 | -0.0405 | -0.0149 | -0.1474 | 0.5823 |
| Q29B_1 | -0.0344 | 0.0446 | -0.1211 | -0.1165 | 0.1738 | 0.0959 | 0.5402 | 0.1766 | 0.066 | 0.0434 | -0.0818 | 0.0722 | -0.1279 | 0.0639 | -0.001 | -0.0459 | 0.1061 | -0.0275 | 0.0355 | -0.1328 | 0.6418 |
| Q29C_1 | -0.0893 | 0.0259 | -0.1317 | -0.1069 | 0.0707 | 0.0761 | 0.5692 | 0.1673 | -0.0928 | 0.0528 | 0.0005 | 0.0452 | -0.0175 | 0.0322 | -0.1074 | -0.091 | -0.0559 | 0.0091 | 0.0988 | -0.1304 | 0.6197 |
| Q30A_1 | -0.1149 | -0.014 | -0.0826 | 0.0264 | -0.0859 | 0.0885 | 0.4194 | 0.1855 | -0.1559 | 0.128 | -0.0518 | 0.0926 | 0.3038 | -0.0875 | -0.0088 | -0.0394 | -0.0795 | 0.0602 | 0.0958 | -0.0255 | 0.5616 |
| Q30B_1 | -0.0624 | 0.0695 | 0.0107 | -0.0119 | -0.1636 | 0.0795 | 0.3865 | 0.1473 | -0.2135 | 0.0491 | -0.1666 | 0.093 | 0.128 | -0.0819 | 0.0039 | 0.0837 | -0.1137 | 0.0209 | 0.0975 | -0.109 | 0.6268 |
| Q30C_1 | 0.0134 | 0.0205 | 0.0101 | -0.0225 | -0.0799 | 0.1294 | 0.3215 | 0.0584 | -0.1362 | 0.1237 | -0.1334 | 0.1414 | 0.3212 | -0.0971 | 0.0131 | 0.0203 | -0.0985 | -0.108 | -0.058 | -0.0075 | 0.626 |
| Q30D_1 | -0.1574 | 0.1081 | 0.0777 | 0.0424 | -0.0062 | 0.1651 | 0.3877 | 0.1473 | -0.0615 | 0.1915 | -0.1725 | 0.0618 | 0.1189 | 0.0246 | 0.0167 | 0.0657 | -0.1518 | -0.0558 | 0.0218 | -0.0374 | 0.6129 |
| Q31A_1 | 0.2537 | -0.0508 | -0.1933 | -0.0143 | -0.0788 | 0.2153 | -0.0751 | 0.1203 | 0.0954 | -0.076 | -0.0359 | 0.0197 | -0.2472 | 0.0011 | -0.1339 | 0.0595 | 0.04 | -0.0859 | 0.0112 | 0.0685 | 0.7465 |
| Q31C_1 | 0.154 | 0.0014 | -0.1006 | -0.0269 | 0.1151 | 0.2186 | -0.0831 | 0.1375 | -0.0422 | 0.0327 | -0.0324 | -0.0227 | -0.2741 | 0.0791 | -0.1449 | 0.0498 | 0.0297 | -0.1912 | 0.1251 | -0.133 | 0.6802 |
| Q32_1 | -0.0311 | -0.0406 | -0.0283 | 0.1334 | -0.0629 | -0.1397 | 0.1496 | -0.0823 | -0.0154 | -0.0404 | 0.0405 | -0.1106 | 0.0531 | -0.043 | -0.0077 | -0.1705 | 0.1733 | -0.1336 | -0.1404 | 0.0727 | 0.7805 |
| Q33_1 | 0.0212 | -0.0163 | 0.0834 | -0.1442 | 0.1166 | -0.0748 | 0.0009 | 0.0506 | 0.116 | 0.1021 | -0.0195 | 0.03 | 0.161 | 0.0391 | 0.155 | -0.0107 | -0.0036 | -0.042 | 0.0818 | -0.0078 | 0.8631 |
| Q34_1 | 0.1266 | -0.0595 | 0.0266 | 0.0265 | 0.0118 | -0.0405 | -0.095 | -0.0473 | 0.105 | 0.0414 | -0.0069 | 0.1757 | -0.1436 | 0.0896 | -0.167 | 0.0464 | -0.0145 | -0.0306 | 0.1041 | -0.2073 | 0.7939 |
| Q35_1 | -0.0948 | 0.0118 | 0.0127 | -0.024 | 0.0801 | -0.1867 | 0.1221 | 0.008 | -0.0247 | 0.0039 | 0.0719 | -0.0541 | 0.0653 | 0.076 | 0.1418 | -0.1121 | 0.0016 | 0.0293 | -0.0037 | -0.0121 | 0.8665 |
| Q36_1 | 0.0095 | -0.0138 | 0.0205 | 0.0953 | 0.1025 | 0.1423 | -0.0928 | -0.0118 | -0.0635 | -0.2253 | 0.0138 | -0.1515 | -0.0338 | 0.0407 | -0.1029 | -0.0996 | -0.2288 | 0.0601 | 0.04 | -0.0311 | 0.7839 |
| Q37_1 | 0.1083 | 0.1342 | 0.0484 | 0.1215 | 0.2678 | 0.0028 | 0.0206 | -0.0823 | -0.067 | 0.0003 | 0.0615 | -0.1597 | -0.0245 | 0.0701 | 0.0061 | 0.0244 | -0.2036 | -0.1079 | -0.0602 | -0.1083 | 0.7419 |
| Q38_1 | 0.0462 | 0.0058 | -0.1502 | -0.0417 | 0.1773 | 0.1308 | 0.0171 | 0.072 | -0.0299 | -0.1629 | -0.054 | -0.2347 | -0.0012 | 0.078 | -0.2109 | -0.0076 | -0.0507 | -0.1112 | 0.0333 | -0.0796 | 0.7558 |
| Q39_1 | 0.094 | -0.0154 | -0.0602 | 0.0102 | -0.0268 | 0.0492 | -0.1031 | 0.1136 | 0.0118 | 0.0141 | 0.0082 | -0.1672 | -0.1858 | -0.04 | -0.2765 | -0.0392 | -0.0703 | -0.1996 | 0.1221 | -0.0587 | 0.7616 |
| Q3A_1 | 0.0257 | 0.0158 | 0.0792 | 0.1163 | 0.4873 | -0.0342 | -0.0839 | -0.0405 | -0.0732 | 0.3324 | -0.0481 | 0.0813 | -0.1116 | 0.0673 | -0.012 | -0.0681 | 0.0122 | 0.0215 | 0.1654 | 0.1171 | 0.4692 |
| Q3B_1 | 0.0025 | 0.037 | 0.1195 | 0.0175 | 0.4419 | -0.0399 | -0.0098 | -0.0696 | 0.0417 | 0.3031 | -0.0992 | 0.1021 | -0.1041 | 0.008 | 0.0787 | -0.0643 | -0.0217 | 0.005 | 0.0179 | 0.1574 | 0.6197 |
| Q4_1 | 0.1549 | -0.0639 | 0.0892 | -0.0824 | 0.2575 | 0.0956 | -0.1313 | 0.0766 | -0.0064 | 0.1866 | -0.2456 | 0.0037 | 0.0353 | 0.0104 | -0.0824 | -0.0438 | -0.0795 | 0.0668 | -0.1034 | 0.069 | 0.6822 |
| Q40_1 | -0.0367 | -0.044 | 0.1252 | 0.0438 | -0.0193 | 0.0002 | 0.1173 | 0.0301 | 0.0977 | -0.1415 | 0.1525 | -0.0915 | -0.0263 | 0.0733 | 0.2459 | -0.0502 | -0.0015 | -0.1315 | -0.0893 | 0.1123 | 0.7158 |
| Q41_1 | 0.1595 | -0.1079 | 0.0202 | 0.0324 | -0.0513 | 0.0116 | -0.0109 | -0.0382 | 0.0491 | 0.1616 | 0.0588 | -0.18 | -0.1709 | 0.0797 | -0.0935 | -0.0217 | -0.0563 | 0.0728 | 0.098 | -0.1421 | 0.8119 |
| Q42_1 | 0.0763 | -0.0318 | -0.033 | 0.188 | 0.0397 | 0.0159 | -0.0851 | -0.052 | -0.1186 | 0.3331 | -0.1214 | -0.2995 | 0.0913 | -0.01 | 0.1364 | 0.0556 | 0.0942 | 0.0245 | -0.0515 | -0.0205 | 0.6241 |
| Q43_1 | 0.1556 | 0.0144 | -0.0307 | 0.1613 | -0.0677 | 0.0962 | -0.1239 | -0.0697 | -0.161 | 0.2211 | -0.0663 | -0.3694 | 0.125 | 0.0493 | 0.0925 | 0.0026 | 0.0825 | -0.0628 | 0.0437 | 0.0707 | 0.6748 |
| Q46A_1 | 0.0718 | -0.0769 | 0.1123 | 0.1255 | 0.244 | -0.0312 | 0.0237 | 0.1063 | -0.0974 | 0.2674 | -0.0193 | -0.2075 | -0.0343 | 0.0446 | -0.0269 | -0.1202 | 0.0492 | -0.0107 | -0.1804 | 0.0252 | 0.6403 |
| Q46C_1 | 0.0662 | 0.2076 | -0.0358 | -0.0257 | 0.0517 | 0.0174 | 0.0135 | -0.0057 | -0.1693 | 0.0795 | -0.1027 | 0.0913 | -0.0469 | 0.0605 | -0.0042 | 0.0481 | 0.1567 | -0.0397 | 0.0272 | 0.0302 | 0.8492 |
| Q46D_1 | 0.0647 | 0.0131 | 0.086 | 0.0409 | 0.2389 | -0.0383 | 0.1456 | 0.1639 | 0.0379 | -0.0509 | 0.1172 | -0.0488 | 0.0398 | -0.0164 | 0.0972 | -0.1532 | 0.0266 | -0.1359 | -0.0518 | 0.087 | 0.6955 |
| Q48A_1 | 0.0323 | 0.057 | -0.0952 | 0.1143 | 0.0215 | -0.019 | -0.1017 | 0.1916 | 0.1756 | -0.0411 | 0.0682 | 0.1003 | -0.0768 | 0.0333 | 0.3148 | 0.2626 | -0.0553 | -0.1038 | 0.0757 | -0.0484 | 0.713 |
| Q48B_1 | 0.0209 | 0.0819 | -0.0792 | 0.0579 | 0.1318 | -0.0624 | -0.1802 | 0.2022 | 0.044 | -0.0192 | 0.0415 | -0.0712 | 0.0561 | -0.0446 | 0.3972 | 0.3033 | 0.0174 | -0.086 | -0.0128 | -0.0464 | 0.6254 |
| Q48C_1 | 0.0303 | 0.0659 | -0.0227 | -0.015 | 0.0449 | -0.0214 | -0.0726 | 0.3725 | 0.0359 | 0.0594 | 0.0522 | -0.0486 | -0.0241 | -0.0875 | 0.3906 | 0.3114 | 0.0365 | -0.05 | 0.0482 | -0.009 | 0.6071 |
| Q49_1 | 0.0077 | 0.0224 | 0.0425 | -0.053 | -0.0086 | -0.0713 | 0.0214 | -0.1857 | -0.0019 | 0.053 | -0.0333 | 0.0623 | 0.0385 | 0.0353 | -0.3025 | -0.0309 | -0.0937 | 0.063 | 0.3286 | 0.0226 | 0.7461 |
| Q50_1 | -0.0965 | 0.0082 | -0.1088 | 0.0404 | 0.0803 | 0.0901 | 0.0071 | -0.3562 | 0.1156 | -0.0881 | -0.0845 | 0.015 | 0.061 | 0.0219 | 0.0016 | -0.1581 | -0.066 | -0.0073 | 0.3047 | -0.0476 | 0.6723 |
| Q51_1 | -0.0473 | 0.1932 | -0.1142 | -0.0256 | -0.0246 | 0.0452 | 0.0246 | -0.0602 | 0.0999 | -0.0306 | -0.032 | -0.2639 | -0.0616 | -0.0155 | 0.0141 | -0.1372 | -0.1123 | -0.0725 | 0.1484 | 0.1058 | 0.8139 |
| Q52B_1 | 0.1433 | 0.0806 | -0.0051 | 0.0022 | 0.0659 | -0.0106 | -0.0635 | -0.0422 | -0.0292 | 0.0675 | -0.0737 | 0.3538 | 0.2371 | 0.0389 | -0.0538 | -0.0791 | 0.1288 | -0.1379 | -0.0701 | -0.0819 | 0.7698 |
| Q52C_1 | 0.0484 | 0.0034 | -0.0908 | -0.0441 | -0.0803 | 0.1149 | -0.0129 | -0.1268 | 0.0092 | -0.0706 | -0.0379 | 0.5253 | 0.2205 | 0.0747 | -0.0885 | 0.0702 | 0.084 | -0.1657 | -0.061 | 0.0553 | 0.5809 |
| Q52D_1 | 0.1105 | 0.1209 | -0.0685 | -0.066 | -0.013 | 0.0762 | 0.0215 | -0.0489 | 0.0292 | -0.0243 | 0.0773 | 0.6195 | 0.1653 | 0.0123 | 0.0099 | 0.1294 | 0.0869 | -0.0847 | -0.0032 | -0.0121 | 0.5167 |
| Q52E_1 | 0.0155 | 0.1064 | -0.1728 | -0.048 | -0.1733 | 0.085 | 0.028 | -0.0962 | 0.0703 | 0.0023 | -0.0377 | 0.4592 | 0.161 | 0.1224 | -0.0569 | -0.0049 | 0.0813 | -0.0321 | -0.0574 | 0.124 | 0.5456 |
| Q53_1 | 0.0934 | 0.0748 | -0.1609 | 0.1484 | -0.1014 | -0.1241 | -0.0033 | -0.0823 | 0.2052 | -0.0198 | -0.143 | 0.0455 | -0.0266 | -0.0184 | 0.1528 | 0.1482 | 0.0378 | -0.076 | -0.0892 | 0.0095 | 0.7953 |
| Q54_1 | -0.0413 | -0.0649 | -0.0292 | -0.0536 | -0.0703 | -0.1506 | 0.0839 | 0.0746 | -0.134 | 0.089 | -0.1694 | -0.0965 | -0.2555 | -0.0281 | 0.0285 | 0.0076 | -0.0441 | 0.0184 | 0.2339 | -0.0117 | 0.7224 |
| Q56B_1 | -0.0257 | -0.014 | -0.0436 | -0.0075 | 0.1235 | 0.0111 | 0.1562 | -0.0573 | 0.136 | -0.0848 | -0.0104 | 0.1673 | -0.076 | 0.4146 | -0.0026 | 0.0219 | 0.0233 | -0.056 | -0.0542 | -0.006 | 0.6958 |
| Q56C_1 | -0.0209 | 0.1189 | -0.0362 | 0.062 | 0.0422 | -0.0836 | 0.0295 | 0.1145 | 0.0255 | 0.0635 | -0.006 | -0.0558 | 0.0428 | 0.6694 | -0.0706 | 0.0274 | -0.0713 | 0.0019 | -0.0232 | 0.1207 | 0.5513 |
| Q56D_1 | -0.0074 | -0.0474 | -0.1301 | 0.0061 | -0.0053 | -0.126 | 0.0351 | 0.01 | 0.0545 | -0.0342 | -0.0252 | -0.0427 | -0.0075 | 0.7661 | -0.0316 | -0.0701 | 0.0322 | -0.0424 | 0.0284 | 0.0321 | 0.4416 |
| Q56E_1 | -0.0808 | -0.0715 | 0.0046 | 0.0125 | 0.0543 | -0.0013 | -0.0057 | 0.0443 | 0.0168 | 0.0053 | -0.0169 | 0.0869 | 0.0713 | 0.7294 | 0.0358 | -0.0847 | -0.0615 | -0.0341 | -0.013 | 0.0434 | 0.4584 |

| ALL | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q56F_1 | 0.0299 | 0.0489 | 0.004 | -0.0419 | 0.0409 | 0.0714 | 0.0751 | 0.0169 | 0.0173 | -0.1366 | -0.0066 | 0.2128 | 0.1731 | 0.4456 | 0.048 | -0.0789 | 0.0572 | -0.0388 | 0.0411 | 0.0825 | 0.5988 |
| Q56G_1 | -0.077 | 0.0981 | -0.0962 | -0.0042 | -0.1273 | -0.0218 | 0.044 | -0.0108 | -0.0501 | 0.078 | -0.0747 | 0.0881 | -0.1059 | 0.3591 | 0.1355 | 0.2116 | -0.0195 | 0.2252 | -0.0377 | -0.1072 | 0.6562 |
| Q56H_1 | -0.1436 | -0.0576 | -0.0864 | -0.0398 | -0.1435 | 0.0185 | 0.0339 | 0.0586 | -0.2481 | 0.0823 | -0.1469 | 0.1365 | 0.0008 | 0.3787 | -0.0871 | 0.2074 | -0.0312 | 0.0354 | -0.1018 | -0.1303 | 0.5567 |
| Q56I_1 | -0.119 | 0.131 | 0.044 | -0.0328 | 0.0405 | -0.0452 | -0.0029 | 0.023 | -0.0403 | 0.1507 | -0.1361 | 0.0364 | 0.0182 | 0.3456 | -0.1168 | 0.1262 | 0.0361 | 0.1081 | 0.0172 | 0.0358 | 0.7303 |
| Q59A_1 | 0.1785 | 0.0003 | -0.046 | 0.6041 | 0.0263 | -0.0004 | -0.0812 | -0.0205 | -0.0426 | 0.1396 | -0.0126 | -0.1433 | 0.001 | 0.0037 | -0.0264 | -0.1043 | -0.0342 | 0.1106 | -0.0837 | 0.0581 | 0.453 |
| Q59B_1 | 0.1245 | 0.0156 | -0.0194 | 0.5138 | -0.0661 | 0.0994 | 0.013 | 0.021 | -0.0874 | -0.0023 | 0.0051 | 0.0911 | -0.0409 | -0.0119 | 0.0332 | 0.0856 | -0.0143 | -0.0427 | -0.0654 | 0.0699 | 0.647 |
| Q59C_1 | 0.0242 | -0.06 | 0.0384 | 0.6321 | -0.0319 | 0.0647 | 0.0355 | 0.0328 | -0.0494 | -0.0063 | 0.0719 | -0.1835 | -0.0764 | 0.012 | 0.0221 | -0.0131 | -0.0396 | 0.1521 | -0.0076 | -0.0637 | 0.5272 |
| Q59D_1 | 0.0886 | -0.0014 | -0.0016 | 0.4806 | 0.104 | 0.0456 | 0.0454 | 0.1509 | -0.046 | -0.0114 | 0.0923 | 0.0544 | -0.1306 | 0.0304 | -0.0062 | 0.1132 | -0.0132 | 0.0292 | -0.0267 | 0.0767 | 0.6023 |
| Q59E_1 | 0.0642 | 0.0396 | -0.0297 | 0.4962 | 0.0448 | 0.1213 | -0.0521 | -0.0984 | -0.0186 | 0.049 | -0.0176 | 0.115 | -0.0708 | -0.1369 | 0.1014 | 0.0652 | -0.1098 | -0.0542 | 0.017 | 0.1698 | 0.5976 |
| Q59F_1 | 0.01 | 0.0428 | -0.019 | 0.6611 | 0.0961 | -0.0084 | -0.0022 | -0.0688 | -0.1345 | 0.2079 | 0.0689 | -0.1192 | -0.0433 | 0.0814 | -0.0202 | -0.1348 | -0.0509 | 0.0444 | -0.0878 | 0.0783 | 0.4061 |
| Q59G_1 | -0.0091 | 0.0209 | -0.038 | 0.0837 | -0.2777 | -0.0299 | 0.0911 | 0.0286 | 0.1141 | -0.0334 | -0.0238 | -0.0283 | 0.0158 | -0.1068 | -0.1319 | 0.0513 | -0.0855 | 0.0174 | 0.1881 | 0.0919 | 0.8081 |
| Q59H_1 | -0.0538 | 0.0275 | -0.0475 | 0.5659 | 0.2233 | -0.0762 | -0.1335 | -0.1602 | 0.0291 | -0.0551 | -0.0012 | 0.0285 | 0.0582 | -0.0505 | -0.0426 | 0.1892 | 0.0178 | 0.1302 | 0.0362 | 0.0121 | 0.5511 |
| Q59J_1 | -0.0296 | 0.0304 | -0.0621 | 0.4354 | 0.2132 | 0.0421 | -0.0444 | -0.1486 | -0.0552 | -0.0679 | -0.0643 | 0.0353 | 0.0867 | -0.0437 | 0.0671 | 0.1167 | -0.0173 | 0.0318 | 0.0875 | -0.0465 | 0.6908 |
| Q5A_1 | -0.0594 | -0.0778 | -0.0092 | 0.0965 | 0.6286 | 0.0622 | 0.1417 | -0.0123 | 0.1218 | 0.1156 | -0.0343 | -0.0447 | 0.0321 | -0.0052 | -0.1345 | 0.0322 | 0.0976 | 0.0827 | -0.0467 | -0.0298 | 0.6038 |
| Q5B_1 | -0.0939 | 0.0116 | 0.0637 | -0.0025 | 0.7226 | 0.0602 | 0.0582 | -0.0141 | 0.1388 | 0.0654 | -0.1702 | -0.0073 | 0.0974 | -0.0365 | -0.09 | 0.1085 | 0.0848 | 0.0974 | -0.0314 | -0.0637 | 0.5329 |
| Q60A_1 | -0.1591 | -0.0229 | 0.0436 | -0.0662 | -0.0123 | 0.0394 | -0.0103 | -0.0917 | 0.4808 | -0.0273 | 0.1114 | 0.0585 | -0.0431 | -0.0329 | 0.0244 | 0.0748 | -0.0168 | 0.0363 | 0.0006 | 0.0575 | 0.663 |
| Q60B_1 | 0.039 | 0.0689 | -0.0581 | -0.1041 | 0.1593 | 0.094 | -0.0208 | -0.0716 | 0.6897 | -0.0892 | -0.065 | -0.0109 | -0.0625 | 0.0481 | -0.0525 | 0.0844 | 0.0023 | 0.0817 | 0.0229 | 0.0869 | 0.5542 |
| Q60C_1 | 0.0241 | -0.0063 | 0.0263 | -0.0372 | 0.1221 | 0.1031 | -0.0435 | -0.0209 | 0.6643 | -0.1648 | -0.0113 | 0.1416 | 0.0564 | 0.0087 | 0.0166 | 0.0113 | -0.0394 | 0.092 | 0.086 | 0.0749 | 0.546 |
| Q60D_1 | 0.0144 | 0.0212 | 0.0443 | -0.0159 | 0.0965 | 0.0919 | 0.002 | 0.0303 | 0.6168 | -0.0909 | 0.0319 | 0.1195 | -0.0011 | -0.0285 | -0.0705 | -0.065 | -0.0817 | 0.1314 | -0.0874 | -0.001 | 0.5976 |
| Q60E_1 | -0.002 | 0.0551 | -0.0025 | -0.1033 | -0.1475 | 0.167 | -0.0045 | 0.0499 | 0.4813 | -0.0319 | 0.0169 | -0.0774 | 0.0026 | 0.0929 | 0.1658 | -0.1535 | -0.0587 | 0.0278 | -0.0134 | 0.1185 | 0.5773 |
| Q60F_1 | -0.0506 | 0.0914 | -0.0219 | -0.0312 | 0.0474 | 0.1254 | -0.0421 | 0.0124 | 0.6843 | 0.01 | -0.0209 | -0.0368 | -0.029 | 0.0361 | 0.0579 | -0.0606 | -0.0277 | 0.127 | 0.0317 | 0.0842 | 0.545 |
| Q60G_1 | 0.0252 | -0.0123 | -0.0619 | -0.1178 | 0.0442 | 0.117 | -0.0858 | 0.0366 | 0.6657 | 0.0639 | -0.0654 | 0.0612 | -0.0351 | 0.0161 | 0.0143 | 0.0418 | -0.1346 | 0.0488 | -0.0103 | -0.006 | 0.5843 |
| Q61A_1 | -0.0696 | 0.0047 | 0.1715 | 0.0297 | 0.096 | 0.6321 | 0.0084 | 0.0474 | 0.1245 | 0.0308 | 0.007 | 0.0983 | 0.1305 | -0.0093 | -0.0209 | -0.0054 | -0.0089 | -0.0261 | -0.0591 | 0.2054 | 0.5705 |
| Q61B_1 | -0.1053 | -0.0388 | 0.1058 | 0.0804 | 0.0029 | 0.7164 | 0.0015 | -0.0052 | 0.0474 | -0.0792 | 0.0279 | 0.0567 | 0.0415 | -0.0159 | 0.0839 | 0.1335 | -0.0076 | -0.0416 | 0.0394 | 0.2008 | 0.4825 |
| Q61C_1 | -0.0653 | 0.142 | 0.0303 | 0.0225 | -0.003 | 0.6598 | 0.1396 | 0.0806 | 0.1392 | -0.0724 | 0.0228 | -0.0069 | -0.036 | -0.094 | -0.0594 | -0.0435 | -0.1531 | -0.0879 | -0.0025 | 0.0556 | 0.5142 |
| Q61D_1 | -0.0634 | -0.0384 | 0.0971 | -0.0292 | 0.0224 | 0.6101 | 0.063 | 0.1227 | 0.1139 | 0.0837 | -0.075 | 0.0513 | 0.2266 | -0.0673 | 0.0043 | -0.0831 | -0.0569 | -0.0392 | -0.1073 | -0.1055 | 0.521 |
| Q61E_1 | -0.0552 | -0.0351 | -0.0508 | 0.0446 | 0.0628 | 0.6474 | -0.0013 | -0.023 | 0.1696 | -0.0127 | -0.0027 | 0.0345 | 0.0185 | -0.0248 | -0.0259 | 0.071 | 0.0901 | -0.0334 | -0.0377 | 0.0255 | 0.5573 |
| Q61F_1 | 0.0613 | 0.027 | -0.1693 | -0.0973 | 0.0101 | 0.422 | 0.172 | 0.0133 | 0.0734 | 0.034 | -0.0246 | 0.0583 | 0.2322 | -0.0593 | 0.0554 | -0.0012 | 0.1095 | 0.0124 | 0.1649 | -0.0907 | 0.6207 |
| Q62A_1 | 0.1075 | -0.0063 | 0.1284 | 0.1307 | -0.0261 | 0.0298 | 0.09 | -0.1926 | -0.0416 | 0.142 | 0.0337 | 0.1782 | 0.0873 | 0.0449 | -0.0469 | 0.2981 | -0.1005 | -0.0186 | 0.1749 | -0.0547 | 0.6689 |
| Q62B_1 | 0.1069 | -0.0405 | 0.0484 | 0.1792 | -0.033 | 0.1116 | 0.1453 | -0.1045 | -0.0877 | 0.1477 | 0.0082 | 0.2324 | 0.156 | -0.0778 | -0.0009 | 0.1978 | -0.0937 | -0.039 | 0.1965 | 0.1043 | 0.6261 |
| Q65A_1 | 0.2162 | -0.0234 | 0.0982 | 0.2074 | 0.1598 | -0.0776 | -0.0848 | -0.0608 | -0.0599 | 0.5837 | 0.0804 | -0.0883 | 0.0749 | 0.1358 | -0.0462 | -0.0725 | -0.0173 | 0.1279 | -0.0662 | 0.022 | 0.4508 |
| Q65B_1 | 0.3076 | -0.1043 | 0.0015 | 0.0079 | 0.1589 | -0.0399 | 0.1165 | -0.0634 | -0.0478 | 0.6467 | 0.0952 | -0.0233 | 0.0462 | -0.0403 | -0.0394 | -0.0183 | 0.0654 | 0.0677 | 0.0295 | -0.0813 | 0.4334 |
| Q65C_1 | 0.3357 | 0.0528 | -0.0997 | -0.0413 | 0.1537 | -0.0179 | 0.0013 | 0.0728 | 0.0001 | 0.5803 | 0.0402 | -0.0326 | 0.0132 | 0.0336 | 0.0853 | 0.1444 | 0.0544 | 0.0368 | -0.0678 | -0.0263 | 0.5162 |
| Q65D_1 | 0.1783 | 0.0341 | 0.1143 | 0.0615 | 0.2651 | 0.0437 | 0.0554 | -0.0398 | -0.1013 | 0.4679 | 0.0508 | -0.0082 | -0.0245 | -0.0746 | -0.1633 | 0.0991 | 0.1628 | -0.0007 | -0.0446 | -0.005 | 0.564 |
| Q65E_1 | 0.2253 | -0.0107 | -0.0171 | 0.0353 | 0.1487 | 0.0537 | -0.0064 | 0.042 | -0.0466 | 0.5866 | 0.1135 | 0.0115 | 0.0893 | -0.0815 | -0.0576 | 0.0317 | -0.0058 | 0.076 | 0.0335 | -0.0506 | 0.5823 |
| Q65F_1 | 0.4961 | 0.1571 | -0.1422 | -0.0306 | -0.0003 | 0.0099 | 0.0398 | -0.0577 | 0.0824 | 0.3796 | -0.0409 | -0.0376 | 0.2386 | -0.0355 | 0.0907 | 0.0535 | 0.0759 | 0.0284 | -0.0415 | -0.045 | 0.6024 |
| Q65G_1 | 0.6902 | 0.0327 | -0.0377 | -0.0876 | 0.0259 | -0.0849 | 0.0471 | -0.0196 | -0.006 | 0.124 | -0.1236 | -0.0978 | 0.0311 | -0.0642 | 0.0551 | 0.0405 | -0.0017 | 0.1092 | -0.0296 | -0.1004 | 0.4357 |
| Q65H_1 | 0.6359 | -0.0169 | -0.0663 | -0.0994 | 0.0733 | 0.0205 | 0.0698 | 0.015 | 0.0825 | 0.0135 | -0.102 | -0.0368 | -0.1508 | -0.1149 | 0.1696 | -0.0076 | -0.0348 | 0.0099 | -0.033 | -0.0039 | 0.5212 |
| Q65I_1 | 0.5138 | -0.0435 | 0.1053 | -0.1029 | 0.0385 | -0.1149 | -0.0521 | -0.1015 | -0.0316 | 0.0848 | -0.1089 | 0.0431 | -0.0805 | -0.0228 | 0.0909 | 0.0507 | -0.0409 | -0.0127 | -0.0305 | -0.0004 | 0.6223 |
| Q65J_1 | 0.4192 | 0.0037 | -0.0031 | 0.0172 | 0.032 | 0.0233 | 0.0931 | -0.0172 | -0.0282 | 0.3193 | -0.0248 | -0.0357 | -0.0641 | -0.0286 | -0.0206 | 0.1237 | -0.0236 | 0.0629 | 0.0133 | -0.0759 | 0.6245 |
| Q65K_1 | 0.4907 | 0.0245 | -0.1152 | 0.0524 | 0.1298 | -0.1 | -0.0499 | 0.0419 | 0.0063 | 0.3459 | 0.0532 | -0.0039 | -0.0618 | -0.005 | -0.1153 | 0.0486 | -0.0828 | -0.0172 | -0.1204 | -0.0624 | 0.5166 |
| Q65L_1 | 0.5486 | 0.0686 | -0.0685 | 0.0247 | -0.0282 | -0.1164 | 0.0309 | 0.1536 | 0.0683 | 0.2839 | 0.1382 | 0.1113 | -0.0079 | -0.0681 | 0.0372 | -0.0161 | 0.0455 | 0.0257 | -0.0005 | -0.0217 | 0.5856 |
| Q65M_1 | 0.5165 | 0.0035 | 0.0086 | 0.0549 | 0.0528 | -0.0984 | 0.0463 | -0.0701 | 0.167 | 0.0893 | 0.0905 | 0.1436 | 0.1709 | 0.0432 | 0.011 | -0.0574 | -0.0238 | -0.1001 | 0.0394 | -0.1657 | 0.6007 |
| Q65N_1 | 0.5945 | 0.0474 | 0.1543 | 0.0836 | -0.012 | 0.097 | -0.0856 | -0.0041 | 0.0308 | 0.082 | -0.0683 | -0.0175 | 0.0549 | -0.0055 | -0.0537 | 0.0121 | -0.0799 | -0.0201 | -0.0758 | 0.0233 | 0.5538 |
| Q65O_1 | 0.5592 | 0.0217 | 0.103 | 0.0716 | -0.1084 | 0.0348 | -0.1533 | 0.0762 | 0.1194 | 0.0859 | -0.0203 | -0.1562 | 0.0602 | 0.0073 | -0.0862 | -0.0438 | -0.0082 | 0.0756 | -0.1024 | 0.0295 | 0.5467 |

| ALL | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q65P_1 | 0.5685 | -0.0268 | -0.0216 | -0.0149 | -0.1708 | -0.0711 | -0.0769 | 0.1284 | -0.0032 | 0.0949 | 0.1212 | 0.0993 | -0.1452 | -0.1369 | 0.1441 | 0.0181 | 0.0187 | -0.0355 | -0.0184 | -0.1074 | 0.5834 |
| Q66A_1 | 0.491 | -0.0277 | 0.0758 | 0.0528 | -0.0836 | 0.101 | 0.0235 | 0.0464 | -0.1238 | 0.1162 | -0.0186 | 0.0581 | -0.0323 | -0.0099 | -0.1196 | -0.0435 | 0.021 | 0.0322 | 0.0507 | 0.1117 | 0.6029 |
| Q66B_1 | 0.4654 | -0.0332 | 0.0083 | 0.1226 | -0.1233 | -0.0147 | 0.0413 | 0.062 | -0.0321 | 0.0113 | -0.0113 | 0.1503 | -0.1129 | 0.0626 | -0.0391 | 0.0432 | -0.028 | 0.0614 | -0.0405 | 0.2172 | 0.6183 |
| Q66C_1 | 0.5404 | -0.0528 | -0.0146 | 0.0591 | -0.0842 | -0.2227 | 0.09 | 0.045 | -0.0514 | 0.0217 | -0.0288 | 0.214 | 0.0061 | 0.071 | 0.0115 | 0.0598 | -0.0088 | -0.0015 | 0.0596 | 0.1305 | 0.5221 |
| Q66D_1 | 0.5602 | 0.0437 | 0.0334 | 0.0962 | -0.2097 | -0.0765 | 0.0759 | 0.081 | -0.0441 | -0.0182 | 0.0772 | 0.0498 | -0.0736 | 0.0556 | 0.0534 | 0.1698 | -0.1057 | 0.0407 | 0.1345 | 0.197 | 0.5039 |
| Q66E_1 | 0.4871 | -0.0143 | -0.0178 | 0.0742 | -0.1453 | 0.0032 | 0.0797 | 0.0631 | -0.0453 | -0.002 | 0.0653 | 0.001 | -0.0582 | -0.0702 | 0.028 | 0.0997 | -0.0274 | 0.0343 | 0.2082 | 0.1617 | 0.5963 |
| Q67A_1 | -0.0152 | -0.0507 | 0.0002 | 0.0586 | 0.0388 | -0.0312 | 0.0723 | 0.0771 | 0.1276 | 0.2994 | 0.023 | -0.108 | 0.1071 | -0.0779 | 0.1044 | 0.0584 | -0.011 | 0.6277 | 0.0302 | -0.0708 | 0.5932 |
| Q67B_1 | 0.1707 | 0.0363 | 0.1327 | 0.0853 | -0.1123 | 0.0371 | 0.0025 | 0.2211 | 0.0665 | 0.1534 | -0.0268 | -0.1214 | -0.1002 | 0.1402 | 0.0204 | 0.0663 | 0.0808 | 0.5014 | 0.0118 | 0.1123 | 0.5367 |
| Q67C_1 | 0.0859 | 0.0271 | 0.0371 | 0.1498 | 0.0178 | -0.1163 | 0.0454 | -0.041 | 0.0602 | 0.0101 | -0.1049 | 0.029 | 0.0212 | -0.0648 | 0.103 | 0.0197 | -0.0179 | 0.5777 | 0.0974 | -0.0917 | 0.6582 |
| Q67D_1 | 0.2417 | -0.1508 | -0.0679 | -0.1107 | -0.1541 | -0.0273 | 0.1009 | -0.0549 | 0.1634 | 0.1094 | -0.0768 | -0.0416 | 0.1501 | -0.0635 | 0.4517 | -0.0448 | -0.0019 | 0.4241 | 0.0905 | -0.0221 | 0.5741 |
| Q67E_1 | 0.0842 | -0.1086 | 0.1451 | 0.1174 | -0.0456 | -0.0743 | 0.0055 | 0.0418 | 0.179 | -0.0028 | -0.1237 | -0.1117 | 0.138 | -0.0273 | 0.1246 | -0.0096 | -0.0285 | 0.699 | -0.0257 | 0.0462 | 0.5084 |
| Q68A_1 | 0.0493 | 0.4282 | 0.0361 | 0.1003 | -0.0791 | 0.1226 | -0.046 | -0.1111 | 0.0853 | 0.0454 | 0.1186 | -0.1351 | 0.2043 | 0.0778 | 0.0949 | -0.0694 | 0.0631 | 0.0489 | 0.189 | 0.0014 | 0.5979 |
| Q68B_1 | -0.1137 | 0.4428 | 0.1002 | 0.122 | -0.0623 | 0.006 | -0.0249 | -0.0702 | -0.0341 | 0.0188 | 0.1482 | 0.0678 | 0.0468 | 0.0574 | 0.0625 | -0.1182 | 0.0673 | -0.007 | 0.0999 | -0.0641 | 0.5918 |
| Q68C_1 | -0.0926 | 0.5713 | 0.0954 | 0.0118 | -0.0577 | 0.0031 | 0.0901 | -0.0525 | -0.0165 | 0.0596 | 0.1016 | 0.0768 | -0.0982 | -0.021 | 0.0575 | -0.0651 | 0.1023 | -0.066 | -0.0412 | -0.0563 | 0.4815 |
| Q68D_1 | -0.0279 | 0.583 | 0.0681 | 0.0414 | -0.0531 | 0.0716 | 0.1309 | -0.0421 | 0.0349 | 0.0442 | 0.0605 | 0.0339 | -0.1696 | -0.0796 | -0.0169 | 0 | 0.0291 | -0.0565 | -0.1596 | -0.0492 | 0.5304 |
| Q68E_1 | -0.0111 | 0.6159 | 0.0917 | 0.0509 | 0.0287 | -0.0012 | 0.0836 | -0.0461 | -0.0386 | -0.1302 | -0.0735 | 0.212 | -0.078 | -0.0793 | 0.0336 | 0.0454 | 0.0647 | -0.0378 | -0.0817 | -0.0302 | 0.4943 |
| Q68F_1 | -0.0536 | 0.5959 | 0.0965 | 0.0784 | 0.0031 | 0.067 | -0.0205 | 0.0299 | -0.0129 | -0.1226 | -0.1212 | 0.2191 | -0.0141 | -0.0276 | 0.1432 | -0.0117 | 0.099 | 0.0597 | -0.0567 | -0.0557 | 0.4512 |
| Q69A_1 | 0.0528 | 0.5026 | 0.005 | 0.0564 | -0.2372 | 0.0786 | -0.0719 | 0.0968 | 0.0262 | 0.0037 | 0.1531 | -0.0451 | 0.1192 | 0.0038 | -0.0271 | -0.0049 | -0.0433 | -0.0235 | 0.1474 | -0.0858 | 0.5781 |
| Q69B_1 | 0.0226 | 0.6833 | -0.0045 | 0.0504 | -0.1212 | -0.032 | 0.0545 | -0.0302 | -0.0002 | 0.0418 | 0.086 | -0.0054 | 0.0697 | -0.0409 | 0.0487 | -0.1388 | -0.0444 | -0.064 | 0.029 | -0.0539 | 0.4205 |
| Q69C_1 | 0.0601 | 0.7517 | 0.1073 | -0.1421 | -0.1147 | -0.0924 | 0.0371 | -0.0062 | 0.055 | -0.0466 | -0.0974 | -0.0487 | -0.023 | 0.0539 | -0.0742 | 0.0674 | -0.1398 | 0.0274 | -0.0398 | 0.0539 | 0.4063 |
| Q69D_1 | 0.0241 | 0.6789 | 0.0639 | -0.0703 | -0.0665 | -0.0269 | 0.066 | 0.0292 | 0.0398 | -0.0318 | -0.0262 | -0.0022 | 0.0016 | 0.0251 | -0.2024 | -0.0077 | -0.0573 | -0.0952 | -0.0935 | 0.1148 | 0.486 |
| Q69E_1 | 0.1318 | 0.6769 | 0.1344 | -0.043 | 0.0035 | -0.05 | 0.0901 | -0.0951 | 0.0876 | 0.0787 | 0.0208 | -0.0839 | 0.075 | 0.0346 | -0.0709 | -0.148 | -0.0764 | -0.0201 | 0.1043 | 0.0261 | 0.4639 |
| Q69F_1 | -0.0886 | 0.549 | 0.03 | -0.0774 | 0.0073 | 0.0143 | 0.0167 | 0.048 | 0.081 | -0.0539 | -0.0368 | 0.1429 | -0.0033 | 0.0448 | -0.0008 | -0.0389 | 0.0564 | 0.0472 | 0.1259 | 0.025 | 0.5505 |
| Q6A_1 | -0.003 | -0.2166 | 0.0558 | 0.0562 | 0.6546 | 0.0367 | 0.0244 | 0.1096 | 0.0437 | 0.1789 | 0.0333 | -0.0819 | -0.0245 | 0.0819 | -0.1031 | 0.0321 | -0.0115 | -0.1183 | -0.0077 | -0.0246 | 0.4554 |
| Q6B_1 | -0.0702 | -0.1299 | 0.0487 | 0.0779 | 0.671 | 0.0097 | -0.0311 | 0.0814 | 0.0869 | 0.2023 | -0.0154 | -0.0921 | 0.0035 | -0.0017 | 0.0435 | 0.0323 | -0.0569 | -0.1173 | -0.075 | -0.0332 | 0.4533 |
| Q7_1 | 0.2588 | -0.1106 | 0.0814 | 0.037 | 0.4198 | 0.0773 | 0.0711 | 0.0031 | -0.0083 | 0.3887 | 0.012 | -0.0114 | -0.057 | 0.0416 | 0.038 | -0.0577 | 0.0594 | -0.0436 | 0.0529 | 0.03 | 0.5248 |
| Q70A_1 | -0.0505 | -0.1262 | 0.0106 | 0.0517 | -0.0261 | -0.0076 | 0.1186 | -0.085 | -0.0384 | 0.0801 | -0.0277 | -0.1861 | 0.0585 | 0.0726 | 0.3137 | 0.0767 | 0.0646 | -0.0067 | 0.0497 | 0.0127 | 0.8122 |
| Q70B_1 | -0.0571 | -0.1248 | -0.0007 | -0.0599 | 0.0885 | 0.0131 | 0.0925 | 0.0857 | 0.0039 | 0.0629 | -0.0277 | -0.1899 | 0.0024 | 0.0421 | 0.1834 | 0.1 | 0.1873 | -0.0372 | 0.0938 | -0.0038 | 0.8563 |
| Q71A_1 | 0.3585 | -0.1139 | 0.0648 | 0.3088 | 0.0874 | -0.004 | -0.0279 | 0.0037 | -0.0938 | 0.0805 | 0.0085 | 0.0202 | 0.0008 | 0.1273 | 0.0343 | -0.1048 | -0.0907 | 0.0055 | 0.0058 | 0.0538 | 0.5655 |
| Q71B_1 | 0.2472 | -0.0824 | 0.0204 | 0.1654 | 0.0603 | 0.0351 | 0.1304 | 0.0328 | -0.0991 | -0.0304 | -0.0875 | 0.1827 | -0.0877 | 0.0745 | 0.0994 | 0.0946 | 0.0726 | -0.0485 | 0.0664 | 0.0794 | 0.6943 |
| Q71C_1 | 0.1999 | -0.0381 | -0.0704 | 0.1433 | -0.0851 | 0.1541 | 0.0048 | 0.0678 | -0.1737 | -0.0471 | -0.0959 | 0.1739 | 0.0177 | -0.0264 | 0.2634 | 0.1075 | 0.0164 | -0.0205 | 0.0951 | 0.2492 | 0.6489 |
| Q72A_1 | -0.0833 | -0.0718 | -0.0167 | -0.0065 | -0.0401 | 0.0787 | -0.0857 | -0.0589 | 0.0032 | 0.0313 | 0.1102 | 0.1913 | 0.7313 | 0.0542 | 0.0149 | 0.0877 | 0.0288 | 0.1241 | 0.0892 | 0.0994 | 0.4987 |
| Q72B_1 | -0.0388 | 0.0392 | -0.0954 | -0.0663 | 0.0557 | 0.0515 | -0.064 | -0.0576 | -0.0029 | 0.1047 | 0.0809 | 0.1305 | 0.7921 | 0.0506 | 0.0439 | 0.0005 | 0.0481 | 0.0198 | 0.0088 | 0.0907 | 0.4416 |
| Q72C_1 | 0.0055 | -0.0382 | -0.1172 | -0.0574 | 0.0446 | 0.1141 | -0.037 | -0.0198 | -0.1093 | -0.0924 | -0.008 | -0.02 | 0.5259 | 0.0099 | 0.0418 | 0.0475 | 0.0594 | 0.0719 | -0.0093 | 0.0831 | 0.6997 |
| Q73A_1 | 0.0215 | -0.076 | 0.0566 | 0.0186 | 0.0048 | 0.1278 | 0.1706 | 0.6403 | 0.0383 | 0.0945 | 0.1094 | -0.0971 | -0.0598 | 0.0242 | 0.004 | -0.0298 | 0.0572 | 0.0035 | -0.0355 | 0.0478 | 0.5343 |
| Q73B_1 | 0.0903 | -0.0707 | 0.073 | -0.0996 | 0.0235 | 0.0802 | 0.1388 | 0.6318 | -0.0525 | -0.0613 | 0.024 | -0.0444 | -0.0202 | 0.0642 | 0.0441 | -0.0677 | 0.0171 | 0.0393 | 0.0097 | 0.0673 | 0.5302 |
| Q73C_1 | 0.0564 | -0.0271 | 0.065 | -0.0615 | 0.0437 | -0.0105 | 0.172 | 0.6726 | -0.0449 | -0.0613 | -0.0028 | -0.0849 | -0.1173 | 0.0316 | 0.0086 | 0.0707 | -0.0239 | 0.1097 | 0.0287 | 0.0434 | 0.4645 |
| Q73D_1 | 0.0847 | -0.0074 | 0.0622 | 0.0458 | -0.0259 | -0.0428 | 0.1777 | 0.2991 | -0.0195 | -0.0702 | -0.0709 | 0.0758 | -0.0345 | 0.0598 | 0.1323 | -0.0468 | 0.1028 | 0.0471 | -0.0039 | -0.1622 | 0.7634 |
| Q73E_1 | 0.0922 | 0.0402 | -0.1303 | -0.0313 | 0.0149 | 0.0865 | 0.1173 | 0.4167 | 0.044 | -0.0014 | -0.0534 | -0.0016 | 0.0251 | -0.0342 | 0.0599 | -0.0436 | 0.1123 | 0.0369 | -0.0438 | 0.0011 | 0.7908 |
| Q75A_1 | 0.0826 | -0.052 | 0.0473 | -0.021 | 0.1138 | 0.0098 | -0.0376 | 0.0505 | 0.0168 | 0.0951 | -0.0355 | 0.0696 | 0.038 | -0.0834 | 0.049 | 0.4972 | 0.0905 | 0.0371 | -0.0244 | 0.0086 | 0.69 |
| Q75B_1 | 0.1051 | -0.139 | 0.0449 | 0.0334 | -0.0234 | 0.012 | -0.0599 | 0.0267 | -0.0388 | -0.0526 | 0.0125 | 0.1577 | 0.1101 | -0.0872 | -0.0598 | 0.4667 | -0.0169 | 0.0745 | -0.0019 | -0.037 | 0.6858 |
| Q75C_1 | 0.0931 | -0.089 | 0.079 | -0.1007 | 0.0468 | 0.1214 | 0.0278 | -0.0001 | -0.0672 | 0.0063 | -0.0535 | 0.0244 | -0.0299 | -0.0178 | 0.0528 | 0.4054 | 0.0142 | -0.0357 | 0.0078 | -0.0404 | 0.7804 |
| Q76A_1 | -0.0405 | -0.0328 | 0.0655 | 0.0257 | -0.0128 | -0.2416 | -0.0969 | 0.2941 | 0.0579 | -0.0301 | 0.0488 | 0.0301 | 0.1341 | 0.1656 | -0.0281 | 0.234 | -0.2481 | 0.0818 | -0.0704 | 0.0369 | 0.6779 |
| Q76B_1 | 0.0144 | -0.0098 | 0.0755 | -0.056 | 0.0428 | -0.2304 | -0.076 | 0.3685 | 0.133 | 0.0832 | 0.0734 | 0.0586 | 0.154 | 0.0966 | 0.1189 | 0.1747 | -0.0222 | 0.1113 | 0.0145 | -0.0162 | 0.6338 |
| Q78_1 | 0.1175 | -0.0037 | 0.02 | -0.1309 | -0.0119 | 0.0323 | 0.0809 | -0.132 | 0.0267 | 0.1865 | -0.0089 | 0.1829 | 0.0983 | 0.0113 | -0.181 | 0.0331 | -0.0276 | -0.0089 | 0.1162 | -0.0337 | 0.8278 |
| Q85A_1 | 0.0559 | -0.0657 | -0.031 | -0.0781 | -0.0497 | 0.2446 | -0.0416 | -0.1149 | 0.0453 | -0.1313 | 0.1571 | 0.1613 | 0.0678 | 0.1912 | 0.0929 | 0.0052 | -0.0253 | -0.0469 | 0.0513 | 0.0406 | 0.7085 |

| ALL | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q85B_1 | -0.0455 | 0.0354 | -0.0159 | 0.1912 | -0.0262 | -0.0127 | 0.0032 | 0.257 | 0.0253 | -0.101 | -0.0484 | -0.0771 | -0.0672 | -0.0127 | -0.1494 | -0.0724 | 0.0026 | 0.0437 | -0.0633 | -0.093 | 0.8294 |
| Q85C_1 | 0.0393 | 0.0132 | -0.0493 | 0.0192 | 0.1127 | -0.0186 | 0.1134 | 0.2881 | 0.0291 | -0.1602 | 0.024 | 0.0371 | 0.0182 | 0.0177 | 0.1371 | -0.0983 | -0.1385 | -0.0289 | -0.081 | 0.0569 | 0.7507 |
| Q87_1 | 0.0544 | 0.035 | -0.1511 | 0.0403 | 0.1396 | 0.0909 | -0.0359 | -0.0857 | -0.0226 | -0.1084 | -0.0285 | 0.0818 | 0.07 | -0.007 | -0.1328 | 0.2587 | 0.0666 | -0.0023 | 0.0116 | 0.0883 | 0.8067 |
| Q88B_1 | -0.0133 | 0.0009 | -0.2115 | 0.2152 | 0.2102 | 0.0481 | 0.1708 | -0.0228 | 0.0359 | -0.175 | -0.0467 | 0.0435 | 0.0348 | -0.1135 | -0.1471 | 0.0814 | 0.1052 | 0.072 | 0.0058 | 0.2535 | 0.6986 |
| Q89A_1 | -0.0913 | -0.0561 | -0.0442 | 0.2264 | -0.0601 | 0.0009 | 0.3898 | 0.1407 | 0.062 | 0.0054 | 0.0388 | -0.0404 | -0.2249 | 0.0105 | 0.1122 | -0.1 | 0.0355 | 0.0028 | -0.0213 | -0.0234 | 0.6931 |
| Q8A_1 | 0.0175 | -0.0403 | -0.1115 | 0.0172 | -0.0164 | -0.0063 | 0.0381 | 0.0156 | -0.0116 | -0.0165 | 0.6087 | 0.0909 | 0.0876 | -0.0394 | -0.0482 | -0.0121 | -0.0033 | -0.0232 | 0.0788 | -0.068 | 0.6048 |
| Q8B_1 | -0.0589 | 0.0298 | -0.1252 | -0.0068 | -0.0006 | 0.1355 | -0.06 | 0.0974 | 0.0252 | 0.1139 | 0.6241 | 0.06 | 0.0049 | -0.1117 | 0.0276 | 0.0774 | -0.0342 | -0.0279 | -0.084 | -0.0046 | 0.5671 |
| Q8C_1 | -0.0934 | 0.1009 | -0.1067 | 0.0183 | -0.12 | 0.0029 | 0.0208 | 0.0389 | -0.0294 | 0.1531 | 0.7349 | -0.0218 | 0.0697 | -0.0257 | -0.1494 | -0.03 | -0.0261 | -0.1067 | -0.0365 | -0.0231 | 0.4302 |
| Q8D_1 | 0.0184 | 0.0303 | 0.0709 | -0.0041 | -0.0876 | 0.0132 | -0.0512 | -0.0601 | -0.1227 | 0.0001 | 0.5537 | 0.0087 | 0.0098 | 0.0263 | -0.0154 | 0.1105 | 0.0214 | -0.1441 | 0.1474 | -0.1796 | 0.6147 |
| Q8E_1 | 0.0732 | -0.0493 | -0.2442 | 0.073 | -0.0519 | -0.0655 | -0.0018 | 0.0523 | 0.0255 | 0.057 | 0.6951 | 0.017 | 0.0981 | 0.02 | -0.1207 | -0.0964 | -0.0728 | -0.0098 | -0.1047 | 0.0302 | 0.4943 |
| Q90A_1 | -0.0485 | -0.0012 | 0.18 | 0.1247 | -0.1316 | 0.0018 | 0.273 | 0.0098 | 0.0958 | 0.0423 | 0.0534 | -0.0165 | 0.0525 | -0.0456 | 0.0283 | 0.1259 | 0.0789 | -0.0252 | -0.2171 | -0.0277 | 0.7092 |
| Q90B_1 | -0.0363 | 0.031 | 0.6106 | 0.0127 | 0.0853 | 0.0515 | 0.0368 | 0.1298 | 0.0306 | 0.0656 | -0.0274 | -0.108 | 0.0491 | -0.1403 | -0.2145 | -0.0411 | 0.0781 | 0.0319 | 0.0403 | 0.0081 | 0.4723 |
| Q90C_1 | -0.0114 | -0.0319 | 0.2785 | -0.0229 | 0.034 | 0.03 | 0.1303 | 0.1666 | 0.0615 | 0.0224 | -0.1337 | 0.0325 | -0.0382 | -0.0057 | -0.1341 | 0.019 | -0.0855 | -0.0515 | -0.0409 | 0.0218 | 0.807 |
| Q91A_1 | -0.0352 | 0.1144 | 0.755 | -0.0249 | 0.0205 | 0.1163 | -0.0969 | 0.0132 | -0.0123 | 0.0565 | -0.0718 | 0.0015 | -0.1299 | -0.0436 | 0.1077 | 0.0306 | -0.0655 | 0.0431 | -0.0451 | 0.1188 | 0.3676 |
| Q91B_1 | -0.0205 | 0.1475 | 0.7281 | 0.0247 | 0.0284 | 0.0907 | -0.1107 | 0.0048 | 0.0018 | 0.096 | -0.0914 | -0.0251 | -0.0979 | 0.0447 | 0.1019 | 0.0205 | -0.0151 | 0.0227 | -0.0241 | 0.1609 | 0.3938 |
| Q92_1 | -0.0626 | -0.0944 | 0.0225 | -0.0676 | 0.0466 | -0.0253 | 0.0609 | -0.1376 | 0.1608 | 0.0502 | 0.0573 | 0.0719 | -0.0264 | -0.0551 | 0.1377 | -0.0335 | -0.023 | -0.0539 | -0.016 | -0.015 | 0.8735 |
| Q94_1 | 0.0353 | -0.0385 | 0.4882 | -0.1653 | 0.135 | -0.0271 | -0.0067 | 0.0842 | -0.1113 | 0.1346 | 0.1369 | 0.0015 | 0.0626 | -0.0513 | -0.0286 | 0.224 | 0.016 | -0.0272 | 0.0169 | 0.0561 | 0.6226 |
| Q95A_1 | 0.0249 | -0.0035 | -0.6425 | 0.0077 | -0.0911 | 0.047 | 0.0663 | -0.0428 | -0.0182 | 0.0575 | 0.0253 | 0.005 | -0.0977 | 0.0725 | 0.1032 | -0.0628 | 0.0795 | -0.1259 | -0.3278 | -0.0411 | 0.4952 |
| Q95B_1 | 0.0186 | -0.0595 | -0.4443 | -0.0546 | -0.2379 | 0.0842 | 0.0634 | -0.1041 | 0.0347 | 0.037 | -0.1595 | -0.0097 | -0.024 | -0.0232 | 0.3703 | -0.0871 | 0.0878 | 0.0848 | -0.1461 | -0.0117 | 0.5607 |
| Q96_1 | -0.0619 | -0.1236 | 0.3452 | 0.0451 | -0.1886 | 0.0976 | 0.1223 | -0.0249 | 0.0492 | -0.0572 | -0.203 | -0.0223 | -0.1513 | -0.0006 | 0.0338 | -0.0025 | -0.0369 | -0.1364 | -0.0385 | -0.1053 | 0.7045 |
| Q97_1 | 0.092 | 0.0954 | 0.5774 | 0.0442 | -0.0831 | 0.0618 | 0.0281 | -0.0257 | -0.0708 | -0.0525 | -0.1424 | 0.2077 | -0.0565 | 0.0673 | 0.1216 | -0.1452 | 0.0363 | -0.0163 | -0.0071 | -0.1031 | 0.4415 |
| Q98B_1 | 0.0568 | 0.0801 | 0.0977 | -0.0043 | 0.0356 | -0.088 | 0.147 | 0.0338 | -0.1151 | -0.1323 | 0.0288 | -0.1546 | 0.1498 | -0.0418 | 0.1607 | 0.0492 | -0.0495 | -0.0095 | -0.0464 | -0.0036 | 0.787 |
| Q9A_1 | -0.1923 | -0.0033 | 0.0288 | 0.1396 | 0.0862 | 0.2235 | -0.0184 | 0.1471 | 0.0104 | 0.0141 | 0.3411 | 0.0707 | 0.0418 | 0.08 | 0.0419 | 0.0655 | 0.055 | 0.2095 | -0.0486 | -0.1464 | 0.6642 |
| Q9B_1 | -0.1051 | 0.0454 | 0.0418 | 0.1058 | 0.079 | 0.2769 | -0.0039 | 0.0733 | -0.0276 | -0.0685 | 0.2326 | 0.0569 | 0.0385 | -0.0099 | 0.0992 | 0.0375 | 0.0427 | 0.1482 | -0.1763 | -0.1312 | 0.7076 |

| GHANA | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| EA_FAC_B_1 | -0.1329 | -0.1568 | 0.2707 | -0.1246 | 0.1693 | -0.4426 | 0.0835 | 0.02 | 0.1034 | -0.2804 | 0.0421 | 0.1235 | -0.0729 | 0.0469 | -0.0654 | 0.1884 | -0.0325 | 0.1524 | -0.0852 | -0.2701 | 0.3659 |
| EA_FAC_C_1 | 0.0874 | -0.1966 | 0.6207 | 0.0204 | -0.0018 | -0.123 | 0.1165 | 0.1827 | -0.1984 | -0.3947 | -0.006 | -0.0444 | 0.0252 | 0.0047 | -0.08 | -0.1056 | -0.1392 | 0.0451 | 0.1005 | 0.0646 | 0.3411 |
| EA_FAC_D_1 | -0.1349 | -0.3648 | 0.8043 | 0.1094 | 0.0577 | -0.0448 | -0.0059 | 0.0204 | 0.028 | -0.0717 | -0.1314 | 0.0787 | 0.1238 | 0.1321 | -0.0514 | 0.1024 | -0.1282 | -0.0415 | 0.0336 | -0.0465 | 0.1838 |
| EA_FAC_E_1 | -0.1185 | -0.1362 | 0.7776 | 0.1469 | -0.0618 | -0.0468 | -0.1469 | 0.0213 | -0.2501 | -0.0191 | 0.0624 | -0.0665 | -0.1671 | 0.0359 | 0.0875 | -0.047 | 0.0417 | -0.0284 | 0.043 | -0.0216 | 0.2669 |
| EA_ROAD_1 | -0.0476 | -0.1379 | 0.7462 | 0.1397 | -0.0518 | 0.2798 | -0.1284 | -0.0207 | 0.0825 | -0.0399 | 0.069 | 0.0715 | 0.2369 | 0.0495 | 0.0788 | 0.1246 | -0.0866 | -0.3169 | 0.0218 | -0.0904 | 0.1932 |
| EA_SEC_A_1 | -0.0102 | -0.1861 | 0.1472 | 0.0707 | 0.5409 | -0.1026 | -0.0168 | -0.1249 | -0.0364 | -0.3276 | 0.3586 | 0.1369 | 0.1205 | 0.0181 | 0.0299 | -0.1356 | -0.0058 | -0.1118 | -0.0276 | 0.1738 | 0.3848 |
| EA_SEC_B_1 | -0.0716 | 0.0521 | 0.0996 | 0.3805 | 0.1483 | -0.084 | -0.0221 | -0.2595 | -0.1099 | -0.4033 | 0.0471 | -0.2387 | 0.0347 | -0.0339 | -0.1035 | -0.1397 | 0.1126 | -0.1211 | -0.0589 | -0.3178 | 0.4313 |
| EA_SEC_C_1 | 0.1964 | -0.0693 | 0.1241 | 0.3804 | 0.1398 | -0.1926 | 0.1017 | -0.062 | -0.1048 | -0.3332 | 0.0498 | 0.0017 | 0.2342 | 0.1251 | 0.0261 | -0.0309 | -0.0319 | 0.07 | -0.1351 | 0.1712 | 0.4905 |
| EA_SVC_A_1 | 0.0775 | 0.128 | 0.7584 | 0.0249 | 0.0687 | -0.0725 | -0.0469 | 0.0169 | 0.1671 | -0.0826 | -0.121 | 0.0635 | -0.0949 | 0.0093 | 0.0921 | 0.0237 | 0.1121 | 0.0463 | -0.1591 | -0.0905 | 0.2622 |
| EA_SVC_B_1 | -0.12 | -0.0541 | 0.6476 | 0.2164 | 0.1909 | 0.0313 | 0.1226 | -0.0193 | -0.099 | 0.0876 | -0.1626 | -0.1347 | -0.2125 | -0.1356 | 0.1386 | 0.0059 | 0.0266 | 0.2471 | -0.183 | 0.1199 | 0.2315 |
| EA_SVC_C_1 | -0.3274 | -0.1375 | 0.7345 | 0.2114 | 0.074 | 0.0494 | -0.245 | -0.0286 | -0.0931 | 0.1526 | -0.0782 | -0.0703 | 0.0016 | -0.0033 | 0.1473 | -0.0239 | 0.1267 | 0.0711 | 0.0393 | -0.0088 | 0.1617 |
| EA_SVC_D_1 | 0.2641 | -0.0408 | 0.3998 | 0.0211 | 0.0697 | 0.15 | -0.0765 | -0.3152 | 0.0345 | -0.11 | -0.1566 | 0.1828 | -0.0362 | -0.1302 | 0.5857 | 0.0588 | -0.0142 | -0.0304 | 0.1393 | -0.0768 | 0.3933 |
| Q1_1 | -0.2383 | -0.2206 | 0.077 | 0.1205 | -0.3015 | -0.0289 | 0.0489 | 0.1016 | 0.2458 | 0.0568 | 0.0898 | -0.1334 | -0.2778 | -0.1334 | -0.0083 | -0.2373 | -0.0185 | 0.0537 | -0.0486 | -0.0757 | 0.5585 |
| Q101_1 | 0.0518 | -0.1327 | 0.0833 | -0.117 | 0.0342 | -0.1696 | -0.0876 | -0.2338 | -0.1157 | 0.2871 | -0.1469 | -0.0896 | 0.1024 | -0.1055 | 0.1625 | 0.1214 | 0.1349 | 0.0293 | -0.2529 | -0.1104 | 0.5791 |
| Q104_1 | -0.2451 | 0.1749 | 0.3475 | 0.323 | 0.062 | 0.1636 | -0.0796 | -0.3458 | -0.0614 | 0.0796 | -0.0059 | 0.2033 | -0.2056 | 0.0637 | 0.1699 | 0.2318 | 0.206 | -0.1498 | -0.0569 | -0.0037 | 0.2757 |
| Q105_1 | -0.1326 | 0.0002 | -0.3573 | 0.1677 | -0.1845 | 0.2258 | 0.2062 | 0.0837 | 0.2919 | -0.2042 | 0.0465 | 0.1807 | 0.1413 | -0.0802 | 0.1851 | 0.1487 | 0.0374 | 0.1016 | -0.0439 | -0.069 | 0.5142 |
| Q10A_1 | -0.2336 | 0.0174 | 0.0194 | 0.1472 | -0.0319 | 0.3204 | -0.0195 | 0.2537 | -0.1134 | 0.0388 | -0.098 | 0.0309 | 0.1366 | -0.0982 | -0.2742 | -0.2928 | 0.0754 | -0.027 | -0.0611 | -0.2397 | 0.5185 |
| Q10B_1 | -0.1801 | 0.099 | 0.1462 | 0.1274 | -0.03 | -0.1429 | 0.047 | -0.0211 | 0.1084 | 0.2115 | 0.0753 | 0.2838 | 0.0387 | -0.1159 | 0.1557 | 0.2658 | -0.0887 | 0.1411 | -0.0369 | -0.0338 | 0.6173 |
| Q10C_1 | -0.0008 | 0.0457 | -0.0335 | -0.2411 | 0.083 | 0.0654 | -0.1273 | 0.233 | 0.0401 | -0.3821 | 0.151 | -0.0615 | -0.1998 | -0.0465 | -0.1648 | -0.0181 | 0.0545 | 0.0684 | 0.1292 | -0.2148 | 0.5304 |
| Q13A_1 | -0.0587 | 0.2679 | -0.008 | 0.0148 | -0.0391 | 0.1507 | -0.126 | -0.0363 | -0.3566 | -0.1884 | 0.2176 | -0.0474 | -0.2102 | -0.153 | -0.3279 | -0.0518 | -0.0197 | 0.2314 | 0.1273 | 0.0966 | 0.4929 |
| Q13B_1 | 0.1263 | -0.0431 | 0.4358 | 0.0642 | 0.3328 | 0.1658 | -0.3033 | -0.1122 | -0.2137 | -0.086 | 0.1312 | -0.0409 | -0.1336 | -0.1979 | -0.0561 | 0.267 | 0.2206 | 0.0766 | 0.0265 | 0.0339 | 0.1828 |
| Q13C_1 | -0.0931 | 0.028 | 0.0088 | 0.0756 | 0.7226 | -0.049 | -0.0973 | -0.1559 | 0.02 | -0.1691 | 0.2724 | 0.0482 | -0.0915 | -0.0117 | -0.0076 | -0.0052 | 0.2803 | -0.0608 | 0.0636 | -0.1642 | 0.3277 |
| Q13D_1 | 0.0836 | -0.0214 | 0.0494 | 0.1361 | 0.7262 | -0.0652 | 0.0555 | -0.0687 | 0.0239 | -0.2658 | 0.0953 | 0.132 | 0.0691 | 0.1318 | -0.0523 | -0.1727 | -0.0945 | 0.0428 | 0.0106 | -0.1398 | 0.4187 |
| Q14_1 | -0.2324 | -0.0209 | 0.2067 | -0.0763 | 0.1372 | 0.1783 | 0.0907 | 0.0343 | 0.2493 | -0.1425 | -0.0036 | -0.2386 | 0.0117 | -0.0237 | -0.3968 | 0.0648 | 0.019 | 0.2635 | -0.1141 | -0.2295 | 0.37 |
| Q15_1 | -0.2943 | 0.0146 | 0.2311 | 0.0388 | -0.1274 | 0.3472 | -0.0321 | -0.0087 | 0.0227 | 0.0025 | 0.069 | 0.1309 | -0.193 | 0.167 | -0.5056 | -0.0047 | 0.0918 | 0.1439 | 0.2284 | 0.2436 | 0.2458 |
| Q16_1 | 0.1379 | -0.0098 | -0.1899 | -0.0622 | 0.0169 | 0.1388 | -0.2429 | -0.0723 | -0.0174 | -0.3913 | 0.0367 | 0.0762 | 0.3667 | -0.021 | 0.1537 | 0.1942 | -0.0501 | 0.0638 | -0.0602 | -0.0762 | 0.4423 |
| Q17A_1 | -0.0546 | -0.6317 | 0.13 | 0.1048 | -0.1574 | 0.0296 | -0.2106 | -0.0677 | 0.0595 | -0.1867 | 0.0856 | 0.1422 | 0.0041 | -0.0326 | -0.1327 | 0.1191 | 0.0874 | -0.0153 | -0.0415 | -0.0493 | 0.2111 |
| Q17B_1 | 0.0689 | -0.0818 | -0.1835 | 0.2006 | -0.0751 | -0.0795 | 0.3784 | -0.1175 | 0.2049 | 0.0186 | -0.3049 | -0.3197 | -0.1906 | 0.2126 | -0.096 | 0.1422 | 0.2076 | 0.0557 | -0.0011 | 0.1131 | 0.3611 |
| Q17C_1 | 0.3301 | -0.0255 | -0.0002 | -0.0261 | -0.1071 | -0.0454 | -0.046 | 0.0158 | -0.0872 | -0.0949 | -0.3721 | -0.3505 | 0.0776 | 0.1564 | -0.2165 | -0.1019 | 0.0545 | 0.1213 | -0.025 | 0.0952 | 0.536 |
| Q18_1 | -0.0369 | -0.0765 | -0.0745 | 0.1945 | -0.2022 | -0.0084 | 0.1976 | -0.2378 | -0.1076 | -0.1074 | -0.0902 | -0.3328 | 0.0859 | 0.1948 | 0.2007 | -0.0023 | 0.031 | -0.1894 | 0.162 | 0.043 | 0.4234 |
| Q19_1 | -0.1269 | -0.1302 | -0.0325 | 0.2609 | -0.0417 | -0.5678 | -0.0294 | 0.118 | -0.1084 | -0.026 | -0.0673 | 0.1142 | -0.2874 | 0.3023 | -0.0812 | -0.1079 | 0.1555 | -0.1132 | -0.1351 | 0.0006 | 0.3904 |
| Q20_1 | 0.3984 | 0.038 | 0.0246 | 0.1196 | -0.008 | -0.0468 | 0.0532 | -0.1161 | -0.3205 | 0.2291 | 0.0179 | -0.2378 | 0.1928 | 0.127 | 0.2637 | -0.1105 | 0.0612 | 0.2438 | 0.2803 | -0.1284 | 0.3592 |
| Q21_1 | -0.0109 | -0.0994 | -0.1336 | 0.0271 | 0.075 | -0.0163 | 0.081 | 0.0084 | -0.1204 | 0.1516 | 0.0741 | 0.0401 | 0.1216 | 0.6616 | 0.0869 | -0.1415 | 0.1306 | 0.0188 | -0.0352 | 0.2294 | 0.3132 |
| Q22_1 | 0.0366 | -0.1296 | 0.0919 | -0.1615 | 0.1542 | 0.2388 | 0.0203 | -0.7965 | -0.0195 | -0.1555 | -0.0268 | -0.0361 | -0.1028 | -0.0333 | 0.1872 | -0.1344 | -0.0074 | -0.1079 | 0.0716 | -0.0971 | 0.3281 |
| Q23_1 | 0.0407 | 0.1342 | -0.0393 | 0.1094 | 0.0213 | -0.2321 | 0.2162 | -0.1767 | 0.1079 | 0.4263 | 0.0189 | -0.0773 | -0.0436 | -0.3316 | -0.0207 | -0.0458 | 0.2556 | 0.0249 | -0.153 | -0.1151 | 0.3471 |
| Q24_1 | -0.0395 | -0.0733 | -0.0641 | -0.0252 | -0.1898 | 0.0264 | 0.5696 | -0.22 | -0.1616 | -0.1204 | -0.0684 | -0.3025 | 0.0517 | 0.1486 | 0.2903 | 0.0725 | 0.0327 | -0.1562 | -0.1079 | -0.14 | 0.2982 |
| Q25A_1 | 0.1327 | -0.1219 | 0.1101 | -0.1519 | 0.0014 | 0.1015 | -0.1385 | -0.0551 | -0.0366 | -0.0414 | 0.2318 | 0.5237 | 0.096 | 0.1442 | 0.1132 | 0.0763 | 0.3165 | -0.0887 | 0.3015 | -0.1418 | 0.3178 |
| Q25B_1 | 0.3416 | 0.0388 | 0.0745 | -0.2501 | -0.3032 | 0.1887 | 0.1995 | -0.2139 | -0.0262 | -0.0596 | 0.3752 | 0.369 | -0.1201 | 0.0315 | -0.0755 | 0.0199 | 0.0356 | 0.2233 | 0.3085 | -0.0151 | 0.2473 |
| Q26A_1 | 0.1585 | 0.0291 | 0.0405 | 0.0138 | -0.4195 | 0.1522 | -0.062 | 0.003 | -0.1588 | -0.0781 | 0.1816 | 0.0918 | -0.0221 | -0.0255 | -0.4388 | -0.0933 | 0.1039 | -0.1885 | 0.1711 | -0.1412 | 0.379 |
| Q26B_1 | 0.0273 | 0.1649 | 0.0472 | 0.2814 | -0.0782 | -0.1435 | -0.0792 | -0.0254 | -0.2092 | -0.09 | 0.2966 | -0.0009 | 0.2003 | -0.2049 | -0.5029 | -0.2179 | 0.0564 | -0.1443 | 0.1137 | -0.1371 | 0.325 |
| Q26C_1 | 0.2922 | 0.1624 | 0.1764 | 0.0413 | 0.2234 | -0.1407 | -0.0226 | -0.3897 | 0.0182 | 0.0888 | 0.3697 | 0.006 | 0.1513 | -0.0801 | -0.0619 | -0.0701 | 0.0533 | -0.0151 | 0.22 | 0.0478 | 0.3326 |
| Q26D_1 | 0.0214 | 0.0247 | -0.0364 | -0.2284 | 0.0453 | 0.5781 | 0.0496 | -0.1461 | 0.1515 | -0.2216 | 0.6071 | 0.1624 | -0.1457 | -0.0528 | 0.0999 | -0.266 | -0.0208 | 0.0301 | 0.1049 | 0.013 | 0.2614 |
| Q26E_1 | 0.102 | -0.0631 | 0.0484 | -0.2643 | 0.2608 | -0.0231 | 0.099 | -0.0894 | 0.0716 | -0.1429 | 0.6093 | 0.3104 | -0.2981 | 0.05 | -0.0492 | -0.1123 | 0.1556 | -0.1073 | 0.162 | 0.0746 | 0.3447 |
| Q27_1 | -0.1218 | -0.1434 | -0.1896 | 0.1441 | -0.0585 | -0.0108 | 0.1348 | 0.1267 | -0.0519 | 0.023 | 0.1832 | 0.0534 | -0.5648 | 0.0584 | -0.0839 | -0.0629 | -0.1339 | -0.0184 | -0.1199 | 0.1648 | 0.4038 |
| Q28_1 | 0.0641 | -0.1756 | 0.121 | 0.032 | -0.3257 | 0.0243 | 0.3437 | -0.2123 | 0.1649 | -0.0862 | -0.2062 | -0.1846 | 0.0179 | -0.0588 | -0.307 | 0.0275 | 0.0099 | 0.001 | 0.0351 | 0.1012 | 0.5018 |
| Q29A_1 | 0.1347 | -0.1625 | 0.051 | 0.1264 | -0.0162 | 0.2863 | -0.1511 | 0.2245 | 0.0944 | -0.0044 | 0.2143 | 0.24 | -0.1309 | 0.0586 | 0.107 | -0.297 | -0.2202 | 0.3101 | 0.5423 | -0.124 | 0.3539 |
| Q29B_1 | 0.0268 | 0.0077 | 0.2325 | 0.1381 | -0.1434 | 0.2347 | 0.1031 | 0.3013 | -0.2074 | 0.001 | 0.1187 | 0.1385 | -0.2428 | -0.0537 | 0.0071 | -0.1151 | -0.2341 | 0.5542 | 0.1393 | 0.0247 | 0.303 |
| Q29C_1 | -0.1015 | -0.1883 | 0.181 | -0.076 | -0.1064 | 0.3755 | 0.1118 | 0.0898 | -0.1618 | 0.0331 | 0.1043 | -0.0896 | -0.0816 | 0.0634 | -0.0013 | -0.085 | -0.0602 | 0.1218 | 0.5992 | -0.0675 | 0.4637 |
| Q30A_1 | -0.1866 | 0.0415 | -0.0825 | 0.2397 | -0.0718 | 0.1372 | -0.0046 | 0.4472 | 0.1624 | 0.0725 | 0.3639 | -0.063 | -0.0807 | 0.0843 | -0.209 | -0.1622 | 0.0883 | 0.0115 | 0.1597 | 0.0945 | 0.3885 |

| GHANA | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q30B_1 | -0.0984 | -0.0612 | -0.0763 | 0.0198 | 0.0133 | 0.1368 | 0.047 | 0.0255 | -0.0527 | 0.0095 | 0.8878 | 0.1688 | -0.0734 | 0.103 | -0.0874 | 0.0209 | -0.0131 | 0.0225 | 0.0793 | -0.0326 | 0.2118 |
| Q30C_1 | 0.0836 | -0.113 | 0.0058 | 0.1427 | 0.0205 | -0.2409 | 0.0106 | 0.2682 | -0.2169 | 0.2582 | 0.6293 | 0.2091 | 0.0549 | 0.1538 | 0.1224 | 0.3065 | 0.0525 | 0.1067 | 0.0528 | -0.0355 | 0.3431 |
| Q30D_1 | 0.0212 | 0.1906 | -0.0294 | 0.1235 | 0.0543 | -0.0863 | 0.1336 | 0.4654 | -0.315 | 0.2487 | 0.4197 | 0.0219 | 0.04 | -0.0334 | 0.0026 | 0.4758 | -0.0089 | 0.3447 | 0.1967 | -0.103 | 0.2138 |
| Q31A_1 | 0.1166 | -0.1603 | -0.0208 | -0.2055 | 0.0525 | 0.1953 | 0.0116 | -0.1578 | 0.0874 | -0.1033 | -0.1215 | 0.1352 | 0.23 | -0.2287 | -0.0041 | 0.1415 | 0.1052 | 0.1147 | -0.0856 | -0.0433 | 0.5484 |
| Q31C_1 | 0.2965 | 0.1909 | -0.2725 | -0.2432 | 0.2577 | 0.1778 | -0.0715 | -0.0426 | 0.1126 | 0.1126 | -0.019 | 0.118 | 0.0953 | 0.1985 | 0.032 | 0.3164 | -0.0101 | 0.2378 | 0.1002 | -0.2277 | 0.3055 |
| Q32_1 | -0.0094 | -0.0723 | -0.0053 | -0.102 | 0.0363 | 0.1398 | 0.1632 | 0.1676 | -0.2126 | 0.0106 | 0.0925 | 0.322 | -0.2003 | 0.1089 | -0.0997 | -0.0896 | -0.1197 | -0.0066 | -0.2255 | 0.334 | 0.4646 |
| Q33_1 | -0.0731 | 0.0136 | 0.182 | 0.2493 | -0.0151 | 0.0182 | 0.074 | 0.1952 | -0.0721 | 0.0954 | -0.2606 | -0.0652 | -0.1587 | 0.395 | -0.1431 | -0.0852 | 0.1302 | -0.1052 | 0.0409 | -0.1204 | 0.4997 |
| Q34_1 | 0.0311 | 0.0193 | 0.0142 | -0.025 | 0.1574 | -0.0126 | -0.1043 | 0.0899 | -0.1072 | -0.0779 | 0.0357 | -0.1321 | 0.1943 | -0.4234 | -0.1511 | 0.2005 | -0.0497 | 0.1448 | 0.5743 | -0.1527 | 0.3384 |
| Q35_1 | -0.1704 | 0.0152 | -0.1179 | -0.0372 | -0.3004 | -0.1156 | 0.4613 | -0.205 | -0.1047 | -0.2249 | 0.1182 | -0.1978 | -0.2802 | 0.1654 | -0.0027 | -0.1372 | -0.0249 | -0.0669 | -0.1199 | -0.0488 | 0.2956 |
| Q36_1 | -0.079 | 0.0314 | -0.1403 | 0.072 | -0.1766 | 0.0622 | 0.0865 | -0.1472 | 0.0166 | 0.0255 | -0.1092 | 0.0232 | 0.025 | -0.7382 | 0.0665 | 0.0272 | 0.1594 | 0.0632 | -0.0171 | -0.0371 | 0.3815 |
| Q37_1 | 0.201 | -0.0781 | -0.1046 | 0.1587 | 0.0671 | 0.0867 | 0.1164 | 0.0253 | 0.0334 | 0.2428 | 0.0477 | -0.0992 | 0.0306 | -0.1221 | -0.0017 | 0.0618 | 0.0121 | 0.8549 | 0.1377 | 0.0228 | 0.2465 |
| Q38_1 | 0.1012 | 0.1111 | 0.0026 | 0.0374 | -0.1697 | -0.1071 | 0.0567 | 0.1076 | 0.1848 | -0.1647 | -0.1642 | 0.1543 | -0.0248 | 0.0969 | 0.1858 | -0.0382 | -0.0103 | 0.4458 | -0.0068 | 0.0134 | 0.5652 |
| Q39_1 | 0.1951 | -0.1795 | -0.0826 | -0.0352 | -0.0869 | -0.2342 | -0.1605 | -0.2315 | 0.1087 | 0.1695 | -0.0483 | 0.1071 | -0.1311 | 0.0801 | -0.0042 | 0.1697 | 0.2097 | 0.2894 | 0.094 | -0.0205 | 0.5519 |
| Q3A_1 | 0.2457 | -0.0015 | -0.1656 | 0.0084 | 0.0219 | 0.1312 | 0.2557 | -0.0233 | 0.047 | 0.1245 | -0.1 | -0.2822 | 0.5369 | -0.0737 | 0.1203 | -0.0156 | -0.2269 | 0.1057 | -0.088 | -0.1007 | 0.2893 |
| Q3B_1 | 0.2205 | -0.0479 | -0.0288 | 0.168 | -0.0152 | 0.0891 | 0.0512 | 0.1148 | 0.116 | -0.031 | -0.008 | -0.1992 | 0.8014 | 0.031 | 0.0554 | 0.179 | -0.0927 | 0.0049 | 0.0594 | 0.098 | 0.2385 |
| Q4_1 | 0.2767 | -0.074 | -0.2757 | -0.1086 | 0.0144 | 0.0011 | 0.0675 | 0.0384 | -0.1542 | 0.042 | -0.3278 | -0.2188 | 0.3675 | -0.0686 | -0.0333 | -0.0016 | -0.1025 | 0.1651 | 0.0889 | 0.3359 | 0.3243 |
| Q40_1 | -0.2423 | -0.3596 | -0.1873 | 0.0324 | 0.1035 | -0.087 | 0.1226 | -0.2978 | -0.0093 | 0.0227 | -0.1135 | -0.0202 | -0.0134 | 0.0527 | -0.0673 | -0.3646 | -0.1337 | -0.0966 | -0.0789 | 0.0646 | 0.4841 |
| Q41_1 | 0.2238 | -0.0201 | -0.0141 | -0.1438 | 0.0957 | -0.0297 | 0.08 | 0.085 | -0.0157 | 0.1102 | -0.0381 | -0.1002 | 0.0758 | -0.0068 | -0.6104 | 0.0529 | -0.1149 | 0.0419 | 0.0604 | 0.1448 | 0.4613 |
| Q42_1 | 0.0413 | -0.1737 | 0.0589 | -0.1931 | -0.1689 | -0.0892 | -0.211 | 0.3496 | 0.2151 | 0.0794 | -0.1664 | 0.1123 | 0.0646 | 0.1555 | 0.1384 | 0.0625 | -0.032 | -0.0269 | 0.1576 | -0.0778 | 0.5865 |
| Q43_1 | 0.0477 | 0.1305 | -0.005 | -0.1334 | -0.1028 | 0.2279 | 0.1237 | 0.0933 | 0.2253 | -0.1867 | -0.1023 | 0.1923 | -0.0093 | -0.1595 | -0.2227 | 0.1485 | 0.1274 | -0.1539 | -0.1245 | -0.0795 | 0.5666 |
| Q46A_1 | 0.063 | -0.0438 | 0.0459 | 0.0947 | -0.3054 | -0.0274 | 0.0315 | 0.0741 | -0.3371 | -0.0377 | 0.0258 | 0.0319 | 0.1574 | -0.4182 | -0.2273 | 0.2308 | -0.094 | -0.1888 | -0.0466 | -0.0904 | 0.5043 |
| Q46C_1 | 0.0881 | 0.3767 | 0.0043 | 0.1992 | -0.0127 | -0.3558 | 0.001 | 0.1238 | 0.0327 | -0.0372 | 0.1379 | 0.2256 | 0.1123 | -0.0361 | 0.111 | 0.291 | -0.0402 | 0.4005 | -0.2594 | 0.1077 | 0.343 |
| Q46D_1 | -0.355 | -0.0384 | -0.0043 | -0.1465 | -0.1395 | -0.0891 | 0.0741 | 0.1471 | -0.4097 | -0.0325 | -0.1396 | -0.0696 | 0.2545 | 0.072 | 0.0349 | 0.1268 | 0.0208 | 0.0273 | 0.1453 | 0.1676 | 0.516 |
| Q48A_1 | -0.2532 | 0.1348 | 0.1267 | -0.1159 | -0.1153 | -0.2403 | 0.1243 | 0.0817 | -0.1561 | 0.0574 | -0.0391 | -0.0814 | 0.1139 | -0.1038 | 0.2817 | 0.9434 | 0.0787 | 0.0034 | -0.1936 | 0.1087 | 0.1605 |
| Q48B_1 | 0.1111 | 0.0773 | 0.2309 | -0.0165 | 0.0167 | 0.0168 | 0.0732 | -0.0556 | 0.0666 | -0.1222 | -0.0115 | 0.1026 | 0.1832 | 0.0211 | 0.7315 | 0.3761 | -0.1969 | 0.0538 | -0.0378 | 0.1875 | 0.3302 |
| Q48C_1 | -0.0135 | 0.0443 | 0.1212 | 0.1653 | 0.0762 | -0.0414 | 0.0907 | -0.0214 | 0.0556 | -0.1734 | 0.0549 | -0.0057 | 0.1344 | -0.0893 | 0.6513 | 0.4307 | -0.0722 | 0.167 | -0.0195 | -0.0395 | 0.4058 |
| Q49_1 | 0.0419 | 0.1655 | 0.1088 | -0.0121 | 0.1793 | -0.1219 | -0.061 | -0.1333 | 0.0218 | 0.0838 | -0.0131 | 0.0169 | -0.1352 | 0.0138 | -0.1441 | -0.1226 | 0.8829 | -0.0746 | -0.1245 | -0.1375 | 0.1746 |
| Q50_1 | -0.2085 | -0.0652 | -0.0929 | 0.2737 | 0.2431 | -0.0856 | -0.0163 | 0.1338 | 0.0234 | -0.3012 | 0.0048 | 0.0952 | 0.1669 | -0.0731 | -0.2329 | -0.0605 | 0.1277 | 0.2397 | 0.1904 | 0.0862 | 0.5344 |
| Q51_1 | -0.0776 | 0.0987 | 0.1048 | -0.0665 | -0.3671 | -0.1184 | -0.0261 | -0.3408 | -0.015 | 0.2326 | -0.2673 | 0.3571 | 0.2135 | 0.1235 | -0.0014 | 0.0675 | -0.1021 | 0.1329 | 0.0341 | 0.0029 | 0.2608 |
| Q52B_1 | 0.2703 | -0.0037 | -0.1531 | 0.3219 | 0.1949 | 0.0007 | -0.3339 | 0.1051 | 0.088 | -0.2221 | -0.0661 | -0.2883 | -0.3124 | -0.0822 | -0.0198 | -0.3207 | 0.0201 | 0.0135 | -0.0143 | -0.1373 | 0.3441 |
| Q52C_1 | -0.1998 | 0.0303 | -0.0594 | 0.188 | 0.063 | -0.1187 | 0.0502 | 0.1997 | -0.1477 | 0.1089 | 0.2013 | -0.1252 | 0.0515 | -0.0335 | -0.0945 | 0.2562 | 0.6828 | -0.0407 | 0.0374 | 0.1629 | 0.2767 |
| Q52D_1 | 0 | 0.1427 | -0.2056 | 0.277 | 0.0325 | 0.0546 | -0.1166 | 0.0622 | -0.0786 | -0.1193 | 0.1126 | -0.1946 | 0.145 | -0.0028 | 0.2498 | 0.4447 | 0.1254 | -0.1136 | -0.0585 | 0.4745 | 0.2723 |
| Q52E_1 | -0.1774 | 0.0758 | -0.0725 | 0.1748 | -0.1094 | -0.3179 | 0.0015 | 0.2803 | -0.0299 | -0.2184 | 0.1396 | -0.1057 | 0.1194 | 0.1159 | 0.066 | 0.1808 | 0.449 | -0.0587 | -0.0521 | 0.0423 | 0.4171 |
| Q53_1 | -0.0313 | -0.008 | 0.0012 | -0.0076 | -0.5072 | 0.0402 | -0.0284 | -0.1324 | -0.078 | 0.0544 | 0.0084 | -0.1339 | 0.0289 | -0.3768 | 0.0322 | 0.4249 | -0.0753 | 0.1774 | -0.1349 | 0.0698 | 0.5175 |
| Q54_1 | -0.0594 | -0.3729 | -0.0012 | -0.1436 | -0.0826 | -0.1324 | -0.0816 | -0.1898 | -0.0885 | -0.0263 | -0.0892 | 0.1798 | -0.2758 | 0.0917 | -0.0278 | 0.0621 | 0.0719 | 0.0638 | -0.0127 | 0.0055 | 0.603 |
| Q56B_1 | -0.0527 | -0.0519 | 0.0368 | 0.2999 | 0.0727 | 0.1372 | -0.0919 | -0.0995 | 0.1679 | -0.3884 | -0.0515 | -0.0833 | -0.2259 | 0.0602 | 0.0945 | -0.4037 | 0.273 | 0.205 | 0.0315 | 0.1249 | 0.3529 |
| Q56C_1 | 0.1994 | 0.4658 | 0.0034 | 0.767 | -0.0224 | 0.0199 | -0.0759 | -0.1632 | 0.2167 | 0.074 | -0.0084 | -0.0365 | -0.0264 | -0.0965 | -0.2081 | -0.3635 | -0.0071 | 0.107 | -0.0373 | 0.0985 | 0.1497 |
| Q56D_1 | 0.1652 | 0.1819 | -0.0213 | 0.6477 | 0.1234 | -0.3132 | -0.3479 | 0.0982 | 0.025 | -0.0693 | -0.1477 | 0.118 | -0.1159 | 0.0805 | 0.2166 | -0.0978 | -0.0517 | 0.209 | -0.1346 | -0.0372 | 0.3325 |
| Q56E_1 | -0.0476 | -0.0131 | -0.1073 | 0.5783 | 0.148 | 0.1267 | -0.1313 | 0.0721 | -0.0741 | -0.1665 | -0.0004 | -0.3352 | 0.1174 | 0.0289 | 0.1976 | 0.0575 | -0.1217 | 0.1705 | 0.0941 | 0.0247 | 0.3505 |
| Q56F_1 | -0.1758 | -0.1591 | -0.104 | 0.5671 | 0.1921 | 0.2087 | -0.1655 | 0.0325 | 0.0868 | -0.0218 | 0.1618 | -0.3192 | 0.1348 | -0.1515 | 0.1283 | -0.0003 | 0.0076 | 0.4255 | 0.0724 | 0.0701 | 0.2651 |
| Q56G_1 | -0.3151 | 0.2818 | -0.1276 | 0.2415 | 0.067 | -0.0358 | 0.0504 | 0.0889 | 0.3224 | -0.0822 | -0.0003 | -0.1159 | 0.1492 | -0.0579 | 0.1799 | -0.0881 | 0.0845 | 0.2356 | 0.1577 | 0.0168 | 0.3826 |
| Q56H_1 | -0.2673 | -0.1802 | 0.0664 | 0.5891 | -0.0922 | 0.0226 | -0.2035 | 0.0591 | 0.1652 | 0.0754 | 0.1442 | -0.1789 | 0.0354 | 0.0362 | 0.054 | -0.0514 | -0.1403 | 0.3849 | 0.1215 | -0.3015 | 0.3073 |
| Q56I_1 | -0.1594 | 0.1565 | 0.2596 | 0.669 | -0.1104 | -0.1223 | -0.1481 | -0.0567 | 0.157 | 0.1383 | 0.0958 | -0.1767 | 0.1898 | -0.1145 | -0.0165 | -0.1573 | -0.0931 | 0.2377 | 0.1906 | -0.1665 | 0.231 |
| Q59A_1 | 0.5568 | 0.1312 | -0.1355 | -0.0135 | -0.1415 | -0.1596 | 0.0062 | 0.1184 | 0.1607 | -0.239 | 0.0448 | -0.0768 | 0.0764 | -0.1472 | 0.0223 | 0.024 | -0.2606 | -0.2141 | -0.0607 | -0.0856 | 0.2576 |
| Q59B_1 | 0.4988 | 0.051 | 0.2466 | 0.1603 | 0.1413 | 0.1417 | 0.3238 | -0.3264 | 0.3215 | -0.1315 | 0.1938 | 0.0186 | -0.0725 | 0.0088 | 0.0775 | -0.0224 | -0.0243 | -0.1768 | -0.0331 | -0.0253 | 0.2434 |
| Q59C_1 | 0.2182 | 0.0845 | 0.1085 | 0.0019 | 0.1619 | 0.1349 | 0.3615 | -0.049 | 0.2506 | 0.0129 | 0.1653 | -0.0292 | -0.0615 | -0.162 | -0.0138 | 0.0561 | -0.002 | -0.2342 | 0.014 | -0.2768 | 0.4229 |
| Q59D_1 | 0.265 | -0.0731 | -0.2161 | 0.1103 | -0.2574 | 0.0643 | 0.3453 | 0.1367 | 0.2864 | -0.1356 | 0.2572 | 0.0024 | -0.0379 | -0.0579 | 0.0027 | 0.0502 | 0.0951 | -0.0578 | -0.0335 | 0.0562 | 0.4439 |
| Q59E_1 | 0.4382 | 0.1902 | -0.1932 | -0.0789 | -0.0455 | 0.0126 | 0.3054 | 0.1359 | 0.3343 | 0.0792 | 0.1886 | 0.0417 | -0.0995 | -0.1719 | 0.0261 | -0.0743 | 0.1526 | -0.2393 | 0.0237 | 0.0135 | 0.2803 |
| Q59F_1 | 0.406 | 0.0896 | -0.2023 | -0.1072 | -0.1046 | -0.2864 | 0.3739 | 0.0392 | 0.06 | -0.0639 | 0.0445 | 0.003 | 0.0954 | 0.0473 | -0.0156 | -0.0066 | 0.0216 | -0.1916 | -0.0719 | -0.159 | 0.3979 |

| GHANA | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q59G_1 | -0.2081 | -0.0945 | -0.3737 | -0.0667 | 0.055 | -0.1176 | 0.1922 | -0.0729 | 0.138 | 0.1438 | 0.1525 | 0.5085 | -0.2697 | -0.21 | -0.1929 | 0.0965 | 0.0091 | -0.0343 | 0.0542 | -0.142 | 0.3641 |
| Q59H_1 | 0.0183 | 0.1539 | -0.1435 | 0.0242 | -0.0946 | 0.3032 | 0.2563 | 0.0793 | 0.868 | -0.0496 | 0.0381 | 0.0312 | 0.0429 | 0.1821 | 0.0408 | -0.1212 | -0.0604 | 0.082 | -0.1089 | 0.2629 | 0.2252 |
| Q59J_1 | 0.1844 | -0.2025 | -0.0287 | 0.3435 | -0.0174 | 0.1109 | 0.0866 | 0.0943 | 0.5846 | 0.0652 | 0.0869 | 0.3047 | -0.0315 | 0.0442 | -0.0736 | -0.1228 | 0.0645 | -0.0961 | -0.1296 | 0.1586 | 0.3615 |
| Q5A_1 | -0.0408 | -0.099 | 0.1536 | -0.0123 | 0.0524 | -0.2036 | 0.4397 | 0.0478 | 0.0622 | -0.1342 | -0.1678 | -0.1 | -0.1332 | -0.1014 | 0.0166 | 0.0921 | 0.0638 | 0.0278 | -0.677 | -0.0613 | 0.373 |
| Q5B_1 | 0.0643 | 0.0699 | 0.1538 | 0.0096 | -0.0331 | -0.2534 | 0.1972 | 0.2422 | 0.0631 | 0.0961 | -0.1594 | -0.1482 | -0.0187 | -0.2241 | 0.1327 | 0.2121 | 0.0357 | -0.0662 | -0.672 | 0.1003 | 0.3577 |
| Q60A_1 | -0.3257 | 0.1546 | -0.0193 | -0.2553 | 0.2042 | -0.0277 | 0.249 | -0.0802 | 0.2364 | 0.0334 | 0.2305 | 0.1859 | 0.1601 | 0.194 | 0.011 | -0.0221 | -0.0526 | 0.0125 | 0.1004 | 0.3113 | 0.3344 |
| Q60B_1 | -0.122 | 0.2715 | 0.0281 | -0.0668 | 0.1049 | 0.0834 | 0.1886 | -0.0157 | 0.1317 | 0.0315 | -0.1105 | 0.1229 | 0.0599 | 0.2249 | 0.0486 | 0.2125 | 0.0592 | 0.043 | 0.1562 | 0.2814 | 0.5704 |
| Q60C_1 | -0.1494 | 0.1611 | 0.1256 | 0.1935 | 0.055 | 0.3699 | 0.0494 | 0.147 | 0.0785 | 0.2044 | -0.093 | 0.1578 | 0.0391 | 0.0951 | 0.0883 | -0.0083 | 0.0022 | -0.0878 | 0.2273 | 0.3971 | 0.3471 |
| Q60D_1 | -0.0834 | 0.042 | -0.0722 | -0.0684 | -0.0216 | -0.0447 | 0.149 | 0.0249 | 0.1361 | -0.0277 | -0.178 | 0.0062 | -0.1056 | -0.0353 | -0.0203 | 0.195 | -0.1197 | 0.1507 | 0.1698 | 0.5494 | 0.4831 |
| Q60E_1 | -0.1153 | -0.0713 | -0.0158 | 0.1119 | 0.1728 | -0.1821 | 0.3519 | -0.0203 | 0.215 | -0.1075 | -0.2484 | 0.2134 | -0.0856 | -0.1684 | 0.1082 | 0.0724 | -0.2197 | 0.0794 | 0.1062 | 0.3248 | 0.3498 |
| Q60F_1 | 0.0366 | 0.2203 | 0.1045 | -0.0353 | 0.3777 | -0.0752 | 0.1261 | 0.059 | 0.3129 | -0.1492 | -0.1408 | -0.0825 | -0.3602 | -0.0616 | 0.0998 | -0.0509 | 0.0242 | 0.0217 | 0.0537 | 0.3345 | 0.2574 |
| Q60G_1 | 0.1671 | 0.1504 | -0.0915 | 0.0028 | 0.2698 | 0.1209 | 0.1357 | -0.029 | 0.3849 | -0.1528 | 0.0118 | -0.1274 | -0.4097 | 0.2383 | -0.0692 | 0.0392 | -0.0579 | 0.3388 | -0.0455 | 0.2088 | 0.2977 |
| Q61A_1 | -0.1802 | 0.1924 | 0.0214 | 0.2573 | 0.0137 | 0.3264 | 0.0058 | 0.264 | 0.1653 | 0.0522 | 0.1035 | -0.0055 | 0.2214 | 0.0138 | -0.129 | -0.1835 | 0.2106 | -0.1557 | -0.0479 | -0.0401 | 0.528 |
| Q61B_1 | -0.2496 | 0.1832 | 0.0626 | 0.0238 | 0.0976 | 0.4087 | 0.0483 | 0.183 | 0.0077 | 0.1202 | 0.0892 | 0.1356 | 0.1106 | -0.1408 | 0.0473 | -0.1365 | 0.2986 | -0.1169 | -0.0637 | 0.0999 | 0.4271 |
| Q61C_1 | 0.0516 | 0.1913 | -0.0545 | 0.0984 | -0.1581 | 0.8138 | -0.121 | -0.1146 | 0.3559 | -0.0746 | 0.217 | 0.1231 | 0.093 | 0.092 | 0.0175 | -0.1484 | -0.195 | 0.0441 | 0.0563 | -0.0984 | 0.3305 |
| Q61D_1 | 0.0284 | 0.2616 | 0.142 | -0.0369 | 0.1337 | 0.469 | -0.0073 | 0.0892 | 0.103 | 0.1027 | 0.153 | -0.0749 | -0.1633 | 0.457 | 0.154 | 0.0804 | -0.1361 | 0.0366 | 0.0436 | 0.0537 | 0.3932 |
| Q61E_1 | -0.1663 | 0.2207 | 0.1726 | -0.0825 | 0.0743 | 0.2858 | -0.0947 | 0.3899 | -0.0923 | -0.1045 | -0.0056 | 0.163 | 0.2067 | -0.1386 | -0.0546 | 0.1138 | 0.2278 | -0.1806 | 0.2198 | 0.09 | 0.3706 |
| Q61F_1 | -0.1611 | 0.0795 | 0.0951 | -0.1493 | -0.0582 | 0.9424 | -0.0003 | -0.039 | 0.0911 | -0.1053 | 0.137 | 0.001 | 0.033 | -0.0767 | -0.0542 | -0.0631 | -0.102 | 0.0906 | 0.3041 | 0.0062 | 0.2561 |
| Q62A_1 | -0.0896 | -0.1419 | -0.0667 | 0.0915 | 0.0909 | 0.3309 | 0.1172 | 0.168 | 0.0639 | 0.1869 | 0.6862 | 0.0198 | 0.0184 | -0.0551 | -0.0949 | 0.1135 | -0.0302 | 0.2073 | 0.0743 | -0.2045 | 0.3476 |
| Q62B_1 | -0.0119 | -0.0467 | -0.1958 | 0.1989 | 0.2328 | 0.0571 | 0.0564 | 0.2447 | -0.0805 | 0.038 | 0.593 | 0.1093 | 0.1631 | 0.0453 | 0.0451 | -0.0636 | 0.1312 | -0.0493 | 0.0785 | -0.1653 | 0.3828 |
| Q65A_1 | 0.5615 | 0.143 | -0.0444 | 0.0262 | 0.2626 | -0.1257 | 0.1805 | 0.0688 | 0.1029 | 0.061 | -0.0566 | -0.0438 | 0.3329 | 0.2469 | -0.1805 | -0.06 | 0.1057 | -0.1467 | 0.218 | -0.0611 | 0.2708 |
| Q65B_1 | 0.474 | -0.1201 | -0.0296 | -0.0013 | 0.1776 | -0.0934 | 0.0277 | 0.2334 | -0.0573 | -0.0184 | -0.0846 | -0.0411 | 0.3362 | 0.2052 | -0.161 | 0.1231 | -0.0952 | -0.1078 | -0.0989 | -0.2764 | 0.2784 |
| Q65C_1 | 0.5197 | 0.1044 | 0.0959 | 0.1858 | -0.0261 | 0.0966 | 0.3144 | -0.1185 | 0.0134 | 0.0255 | -0.093 | -0.2065 | 0.2611 | 0.2715 | 0.1029 | 0.3878 | -0.0277 | 0.1081 | 0.0614 | -0.1731 | 0.1791 |
| Q65D_1 | 0.2929 | 0.0831 | 0.0928 | 0.2589 | 0.1281 | -0.0724 | 0.3311 | 0.1763 | -0.0456 | -0.1433 | -0.1426 | 0.0482 | -0.0362 | -0.0124 | -0.1502 | 0.0111 | 0.0464 | 0.091 | -0.2626 | -0.2524 | 0.4488 |
| Q65E_1 | 0.357 | 0.3354 | 0.0277 | 0.0807 | -0.0368 | -0.2634 | 0.3924 | 0.0917 | -0.2221 | 0.0206 | -0.0089 | -0.0441 | 0.0884 | 0.07 | -0.1678 | 0.1359 | -0.094 | 0.0139 | 0.0827 | -0.2147 | 0.3294 |
| Q65F_1 | 0.7695 | 0.112 | -0.0015 | 0.0403 | 0.0219 | -0.0416 | -0.0164 | -0.0957 | 0.1203 | 0.2077 | 0.078 | 0.081 | -0.0096 | 0.0198 | 0.0153 | -0.1637 | 0.0636 | 0.0263 | -0.0274 | 0.0884 | 0.384 |
| Q65G_1 | 0.851 | 0.0909 | 0.1564 | -0.0121 | -0.1176 | 0.0096 | -0.0082 | -0.0335 | -0.0316 | 0.1035 | -0.0178 | 0.1591 | 0.1409 | -0.0963 | 0.0509 | -0.0065 | -0.1001 | 0.0936 | -0.0131 | 0.0588 | 0.1839 |
| Q65H_1 | 0.8001 | -0.1024 | -0.0452 | -0.0929 | -0.033 | 0.1018 | 0.018 | 0.0935 | -0.1271 | -0.0277 | -0.0648 | 0.2697 | -0.0382 | 0.0164 | 0.216 | -0.0765 | -0.0472 | 0.0125 | -0.0545 | -0.0301 | 0.0997 |
| Q65I_1 | 0.7144 | -0.1565 | -0.2297 | -0.0384 | -0.0896 | -0.1552 | -0.2156 | 0.0126 | -0.0972 | -0.1188 | 0.0047 | 0.2857 | -0.0717 | -0.0665 | 0.1125 | -0.0805 | -0.0376 | -0.0348 | 0.0384 | -0.0584 | 0.2186 |
| Q65J_1 | 0.7064 | -0.0012 | 0.1575 | -0.114 | 0.2145 | -0.0569 | -0.2498 | 0.1501 | 0.177 | -0.0873 | -0.1261 | 0.12 | 0.2051 | 0.056 | 0.0214 | -0.0088 | 0.1622 | -0.0717 | 0.0595 | 0.0466 | 0.1776 |
| Q65K_1 | 0.7956 | 0.0548 | -0.2182 | 0.0657 | 0.0454 | -0.291 | 0.1726 | -0.0968 | 0.0362 | 0.1952 | 0.0153 | 0.223 | -0.1176 | 0.0431 | -0.0594 | -0.1752 | 0.093 | 0.1774 | 0.0387 | 0.0169 | 0.1449 |
| Q65L_1 | 0.7977 | 0.0572 | 0.0744 | 0.1174 | -0.1501 | -0.093 | 0.0602 | -0.1241 | 0.1596 | 0.1276 | -0.0652 | -0.0608 | -0.1712 | -0.0335 | 0.1147 | 0.1118 | -0.0217 | -0.0344 | 0.0212 | 0.1493 | 0.2579 |
| Q65M_1 | 0.5859 | -0.0039 | -0.0565 | 0.2586 | -0.0213 | 0.0565 | 0.1601 | 0.2387 | 0.0954 | 0.0032 | -0.0586 | -0.1684 | -0.1461 | -0.0815 | -0.0681 | 0.217 | 0.1954 | 0.1351 | -0.0981 | 0.0277 | 0.2586 |
| Q65N_1 | 0.8655 | 0.0782 | -0.0774 | -0.1358 | -0.0544 | 0.0673 | 0.0114 | -0.0643 | -0.0375 | 0.0468 | 0.0895 | 0.0124 | 0.0853 | 0.0051 | 0.0449 | -0.0549 | -0.1408 | 0.1753 | 0.0987 | 0.0038 | 0.1649 |
| Q65O_1 | 0.7707 | 0.0301 | -0.0007 | -0.1217 | -0.0686 | -0.2396 | 0.0477 | 0.0696 | -0.0669 | -0.0378 | -0.0305 | 0.0285 | 0.1641 | -0.0927 | -0.1872 | -0.0184 | -0.1293 | -0.0321 | -0.0683 | 0.0328 | 0.1518 |
| Q65P_1 | 0.701 | 0.1039 | -0.0359 | -0.2708 | -0.1917 | 0.0652 | 0.0068 | -0.1463 | -0.103 | -0.0139 | 0.0199 | -0.0604 | -0.0034 | -0.0554 | 0.0048 | -0.0427 | 0.0796 | 0.1764 | -0.1015 | -0.1321 | 0.2284 |
| Q66A_1 | 0.3233 | -0.2274 | 0.1293 | -0.0803 | 0.0162 | 0.1838 | 0.0279 | 0.1946 | -0.0617 | -0.1021 | -0.1046 | -0.0394 | 0.2017 | -0.1981 | 0.0126 | 0.0131 | 0.1993 | 0.3501 | 0.0179 | -0.205 | 0.32 |
| Q66B_1 | 0.2289 | -0.2319 | 0.0157 | 0.116 | -0.0451 | 0.0991 | 0.1474 | 0.1275 | 0.0098 | -0.1465 | -0.2924 | 0.0861 | 0.1272 | -0.2576 | -0.0156 | -0.0095 | 0.3515 | 0.1847 | 0.0441 | -0.0378 | 0.3602 |
| Q66C_1 | 0.5031 | -0.2242 | -0.0052 | 0.1747 | -0.0824 | -0.2379 | 0.023 | 0.0698 | 0.1004 | 0.0089 | -0.0614 | 0.1568 | -0.0827 | 0.0234 | 0.0396 | 0.1133 | 0.5199 | 0.1666 | -0.0103 | 0.1613 | 0.271 |
| Q66D_1 | 0.5415 | -0.0463 | -0.1349 | -0.047 | -0.1083 | 0.0329 | 0.0192 | -0.114 | -0.0166 | 0.2039 | 0.122 | 0.0373 | 0.0659 | -0.2481 | 0.0019 | -0.281 | 0.1299 | 0.1845 | 0.1275 | 0.1413 | 0.3853 |
| Q66E_1 | 0.3283 | -0.2428 | -0.1161 | -0.1468 | -0.2486 | 0.2029 | 0.0808 | 0.125 | -0.2757 | 0.2236 | 0.1023 | 0.1929 | 0.0297 | -0.2575 | -0.2013 | -0.1023 | 0.1226 | 0.2312 | -0.0209 | 0.0322 | 0.3216 |
| Q67A_1 | 0.3045 | 0.0969 | 0.4439 | -0.1845 | -0.2169 | -0.0132 | 0.2205 | 0.5085 | 0.0316 | 0.1154 | -0.014 | -0.102 | 0.0538 | -0.0069 | 0.1283 | 0.028 | 0.0229 | 0.1183 | -0.0934 | 0.1434 | 0.2555 |
| Q67B_1 | 0.4093 | 0.1186 | 0.3876 | -0.2487 | 0.02 | -0.2074 | -0.0543 | 0.1489 | 0.1433 | -0.0651 | -0.0166 | -0.0142 | 0.1834 | -0.1027 | 0.0483 | -0.2296 | 0.1247 | -0.1248 | 0.0087 | 0.0124 | 0.2908 |
| Q67C_1 | 0.2932 | -0.2098 | 0.2246 | 0.0427 | 0.1203 | 0.0413 | -0.1313 | 0.2848 | 0.2609 | -0.159 | -0.0739 | -0.0486 | 0.0973 | -0.1676 | 0.0612 | -0.2442 | 0.1565 | 0.0083 | -0.1348 | 0.1864 | 0.3622 |
| Q67D_1 | 0.3028 | 0.0119 | 0.1985 | 0.0927 | 0.0881 | 0.0122 | 0.0256 | 0.3348 | -0.1456 | -0.3301 | 0.0047 | 0.1377 | -0.0315 | -0.05 | 0.2404 | -0.031 | -0.0679 | -0.1651 | -0.27 | 0.0834 | 0.3517 |
| Q67E_1 | 0.2332 | -0.0349 | 0.416 | 0.0522 | 0.0748 | 0.037 | 0.1641 | 0.1918 | 0.208 | -0.0888 | -0.0101 | -0.1285 | 0.2209 | -0.2559 | 0.1218 | 0.0644 | 0.0012 | -0.0784 | -0.0859 | 0.3273 | 0.2999 |
| Q68A_1 | 0.2243 | 0.837 | 0.0513 | -0.0297 | 0.0148 | 0.1414 | -0.14 | 0.0505 | 0.196 | 0.1416 | 0.0542 | 0.0797 | 0.1707 | 0.1407 | -0.135 | 0.0132 | 0.1314 | 0.022 | -0.0798 | 0.0155 | 0.2153 |
| Q68B_1 | 0.0237 | 0.8878 | -0.0908 | 0.0621 | -0.1345 | 0.5316 | -0.2669 | 0.0395 | 0.1476 | 0.1864 | -0.136 | -0.1279 | 0.1123 | 0.1561 | -0.0994 | -0.0256 | -0.0539 | 0.0321 | -0.1016 | 0.1668 | 0.1507 |
| Q68C_1 | 0.1343 | 0.8454 | -0.1167 | 0.0854 | -0.0623 | -0.0361 | -0.3499 | 0.0423 | 0.1581 | 0.0517 | -0.105 | -0.0491 | -0.0271 | 0.0599 | -0.0944 | 0.0218 | -0.0244 | -0.3106 | -0.028 | 0.0359 | 0.2741 |

| GHANA | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q68D_1 | 0.0236 | 0.8078 | -0.1618 | 0.0048 | -0.0272 | -0.1291 | -0.0464 | 0.1773 | -0.0065 | 0.0843 | 0.0461 | 0.1271 | -0.0966 | -0.0007 | 0.0626 | 0.0696 | 0.0184 | -0.3627 | 0.0092 | 0.0086 | 0.2607 |
| Q68E_1 | -0.0939 | 0.772 | -0.0428 | -0.0117 | -0.0574 | 0.1279 | 0.0117 | 0.0226 | -0.0174 | -0.0655 | 0.1032 | -0.0064 | -0.0118 | 0.0558 | 0.3753 | 0.314 | 0.034 | -0.1177 | -0.0372 | 0.0899 | 0.2481 |
| Q68F_1 | -0.1222 | 0.7564 | -0.1225 | -0.0469 | -0.0599 | 0.1206 | -0.0708 | -0.0062 | 0.1162 | -0.0987 | 0.1756 | -0.1069 | 0.0649 | 0.0634 | 0.2494 | 0.2883 | 0.2022 | -0.0051 | -0.0178 | 0.0474 | 0.2225 |
| Q69A_1 | 0.0314 | 0.7578 | -0.0053 | 0.0268 | 0.2603 | 0.0024 | -0.0883 | 0.1091 | 0.1612 | 0.0863 | -0.0847 | 0.2211 | -0.0785 | -0.0345 | -0.304 | 0.0993 | 0.0701 | -0.042 | 0.0836 | 0.0857 | 0.1419 |
| Q69B_1 | -0.041 | 0.6978 | -0.0734 | 0.0728 | 0.1044 | 0.1863 | 0.1392 | -0.0708 | 0.012 | -0.0177 | -0.1739 | 0.0806 | -0.1473 | -0.1914 | -0.1256 | 0.1714 | -0.1588 | 0.1639 | -0.1497 | -0.0431 | 0.2468 |
| Q69C_1 | 0.0577 | 0.6209 | 0.0093 | 0.0586 | 0.0415 | 0.125 | -0.044 | -0.1333 | -0.1989 | 0.1773 | -0.1238 | 0.2967 | -0.1069 | -0.1113 | 0.1442 | -0.0359 | 0.0536 | 0.0823 | 0.2549 | -0.1068 | 0.2768 |
| Q69D_1 | 0.0662 | 0.6538 | -0.116 | -0.0151 | 0.1294 | 0.086 | 0.0873 | -0.0774 | -0.1047 | 0.1296 | -0.1278 | 0.2213 | -0.0365 | -0.0293 | -0.0038 | -0.0859 | 0.043 | 0.0418 | 0.0074 | -0.0891 | 0.421 |
| Q69E_1 | 0.1876 | 0.5407 | -0.2033 | 0.1458 | 0.1061 | 0.105 | -0.016 | -0.1617 | -0.2676 | 0.0711 | -0.2048 | 0.1146 | -0.1953 | -0.3179 | 0.03 | -0.0484 | -0.1101 | 0.0613 | -0.0424 | -0.0201 | 0.3703 |
| Q69F_1 | -0.0863 | 0.5499 | 0.0521 | 0.0754 | 0.2497 | 0.2336 | -0.0147 | 0.0746 | -0.0414 | -0.0036 | 0.0252 | 0.09 | -0.1355 | 0.1905 | 0.1485 | -0.0046 | 0.3089 | 0.1726 | -0.2038 | -0.1752 | 0.305 |
| Q6A_1 | 0.0525 | -0.2595 | -0.1232 | -0.1788 | -0.0333 | -0.0317 | 0.8714 | -0.1073 | 0.1101 | 0.0171 | 0.1124 | -0.0107 | 0.0367 | 0.0174 | -0.0423 | 0 | -0.0077 | 0.2179 | -0.1954 | 0.0051 | 0.2309 |
| Q6B_1 | 0.1779 | -0.1038 | -0.127 | -0.1254 | -0.051 | 0.0074 | 0.8702 | 0.2122 | 0.0863 | 0.1006 | 0.0892 | 0.1112 | 0.0316 | -0.0048 | 0.0497 | 0.1493 | -0.0342 | 0.0552 | -0.1465 | 0.0902 | 0.1693 |
| Q7_1 | 0.4394 | -0.1126 | -0.0174 | -0.0495 | 0.1694 | 0.1943 | 0.2088 | -0.1234 | -0.2065 | 0.0697 | -0.1674 | -0.0074 | 0.2787 | 0.1975 | -0.0296 | -0.0857 | -0.1038 | -0.1014 | -0.0435 | -0.1472 | 0.3433 |
| Q70A_1 | 0.0448 | -0.2238 | -0.0235 | 0.2405 | 0.0308 | -0.0924 | -0.1414 | 0.2159 | 0.156 | 0.0429 | 0.0329 | -0.136 | -0.1177 | -0.0174 | -0.104 | 0.2469 | -0.2622 | 0.0598 | 0.1566 | 0.1152 | 0.5689 |
| Q70B_1 | -0.072 | 0.0678 | 0.0816 | 0.0795 | 0.0561 | -0.026 | -0.1606 | -0.0346 | 0.155 | -0.1948 | 0.0355 | 0.1705 | -0.2745 | -0.0878 | -0.1328 | 0.3479 | -0.1598 | -0.0986 | -0.0729 | 0.2592 | 0.4508 |
| Q71A_1 | 0.6001 | -0.0974 | -0.1072 | 0.1567 | 0.0658 | 0.1665 | 0.0669 | 0.0526 | -0.1216 | -0.1024 | -0.0063 | 0.046 | 0.1996 | 0.0646 | 0.0412 | -0.1786 | 0.12 | 0.0769 | -0.033 | -0.155 | 0.2429 |
| Q71B_1 | 0.1502 | -0.2298 | -0.2028 | 0.0539 | 0.2071 | 0.0357 | 0.1077 | 0.0821 | 0.2004 | -0.3081 | 0.3203 | 0.1861 | 0.1892 | 0.0711 | 0.0078 | 0.01 | -0.0207 | 0.1573 | -0.2778 | -0.0029 | 0.3955 |
| Q71C_1 | 0.0386 | -0.2236 | -0.1504 | -0.0412 | -0.1351 | 0.1753 | 0.2087 | 0.3433 | 0.0357 | -0.1439 | 0.1888 | 0.2706 | 0.2504 | -0.1086 | 0.0182 | -0.0132 | 0.247 | 0.1572 | 0.0965 | 0.1139 | 0.339 |
| Q72A_1 | -0.2541 | -0.0755 | 0.2605 | 0.7352 | 0.084 | -0.0557 | 0.1047 | 0.1308 | -0.0132 | 0.14 | 0.0833 | -0.1829 | -0.061 | -0.0815 | -0.0028 | 0.1386 | 0.1582 | 0.0276 | -0.1161 | 0.0149 | 0.2057 |
| Q72B_1 | -0.0174 | 0.0216 | 0.3162 | 0.8557 | -0.0098 | -0.1311 | -0.0666 | 0.1357 | 0.0311 | 0.2592 | -0.0625 | -0.1125 | 0.0827 | 0.0525 | -0.0482 | 0.0237 | 0.1218 | -0.0328 | -0.0256 | 0.0384 | 0.2293 |
| Q72C_1 | 0.0799 | -0.1069 | 0.1272 | 0.4532 | -0.1454 | -0.0138 | 0.0585 | -0.0686 | 0.0383 | 0.0932 | -0.2366 | 0.1894 | -0.1077 | -0.1616 | 0.3265 | 0.011 | 0.123 | -0.028 | 0.1314 | -0.0259 | 0.496 |
| Q73A_1 | -0.1276 | 0.1622 | -0.0112 | -0.0671 | -0.0235 | -0.0294 | 0.1049 | -0.1766 | 0.2052 | 0.013 | 0.0984 | 0.02 | 0.0411 | 0.7242 | -0.0435 | 0.035 | 0.094 | -0.1274 | 0.1922 | -0.1163 | 0.3024 |
| Q73B_1 | 0.0091 | -0.411 | -0.0076 | 0.0778 | -0.018 | 0.1084 | -0.0945 | 0.3562 | -0.1166 | -0.1853 | 0.0481 | 0.0695 | -0.1344 | 0.0791 | 0.1242 | -0.0841 | -0.201 | -0.2092 | -0.0233 | -0.1088 | 0.2547 |
| Q73C_1 | -0.1453 | 0.0795 | 0.1536 | -0.1481 | -0.109 | 0.0058 | 0.0993 | 0.1238 | 0.1968 | 0.0146 | -0.0934 | 0.1476 | -0.141 | 0.1705 | -0.1328 | -0.1581 | -0.0348 | -0.0222 | 0.1038 | -0.3023 | 0.6308 |
| Q73D_1 | 0.2398 | -0.0315 | 0.2684 | 0.0761 | -0.2625 | 0.0055 | -0.18 | 0.4702 | 0.1336 | 0.0996 | 0.2081 | -0.0996 | -0.0644 | 0.0817 | -0.1389 | 0.06 | -0.1313 | 0.1451 | -0.0843 | 0.2112 | 0.3517 |
| Q73E_1 | 0.1431 | -0.0305 | 0.1833 | 0.0177 | -0.25 | -0.072 | -0.1566 | 0.1927 | 0.2508 | 0.2688 | 0.1084 | -0.152 | -0.0029 | 0.0313 | 0.0125 | 0.0532 | -0.0629 | -0.0212 | -0.15 | 0.551 | 0.4086 |
| Q75A_1 | 0.1411 | -0.4403 | 0.1425 | 0.0261 | 0.0301 | 0.1915 | 0.1507 | -0.1509 | 0.1123 | 0.1213 | 0.3653 | -0.1301 | 0.0241 | -0.0256 | 0.1016 | 0.1483 | -0.1625 | -0.1335 | -0.3198 | -0.0348 | 0.342 |
| Q75B_1 | -0.0356 | -0.5452 | 0.3474 | -0.0824 | -0.1069 | -0.0181 | 0.2736 | -0.0739 | 0.1049 | 0.1594 | 0.0893 | 0.1524 | 0.1856 | 0.1861 | -0.0884 | -0.0095 | 0.0381 | -0.0166 | -0.2258 | -0.0651 | 0.3793 |
| Q75C_1 | 0.0538 | -0.2758 | 0.0069 | 0.3039 | 0.1259 | 0.1457 | 0.1005 | -0.2817 | 0.115 | 0.3154 | 0.3359 | 0.019 | 0.2162 | 0.1152 | -0.1682 | -0.3185 | -0.0028 | 0.0477 | -0.1538 | 0.0194 | 0.4351 |
| Q76A_1 | -0.2265 | -0.1187 | 0.0828 | 0.2773 | -0.1655 | 0.0215 | -0.0005 | -0.083 | -0.0047 | 0.1136 | -0.1277 | -0.825 | 0.1226 | -0.0345 | -0.0732 | 0.0266 | 0.0041 | -0.0201 | -0.0015 | -0.0154 | 0.2384 |
| Q76B_1 | -0.2276 | -0.0457 | 0.0061 | 0.1164 | 0.0511 | -0.1165 | 0.0474 | 0.0338 | -0.0519 | 0.0247 | -0.2568 | -0.8167 | 0.0869 | -0.0123 | -0.0832 | 0.1776 | 0.0761 | 0.083 | -0.0443 | -0.0291 | 0.2747 |
| Q78_1 | -0.0145 | 0.0403 | 0.0146 | -0.2252 | -0.1346 | 0.502 | 0.066 | -0.1122 | 0.1336 | -0.1028 | -0.025 | -0.0079 | 0.1555 | 0.036 | -0.1299 | -0.2054 | 0.0327 | 0.0717 | -0.0542 | 0.1027 | 0.6598 |
| Q85A_1 | 0.0032 | 0.0585 | -0.0529 | 0.1115 | 0.0744 | 0.2065 | 0.13 | 0.3537 | 0.1663 | 0.2426 | 0.0637 | -0.0075 | -0.1718 | 0.0777 | -0.0088 | -0.3447 | 0.0572 | 0.0792 | 0.0498 | 0.1225 | 0.5516 |
| Q85B_1 | 0.1198 | 0.0569 | 0.179 | -0.3246 | 0.0518 | 0.0549 | -0.0572 | 0.0095 | 0.2636 | 0.0794 | -0.0794 | 0.0832 | 0.0393 | -0.1826 | -0.2959 | 0.0193 | 0.1192 | 0.2368 | -0.0584 | -0.0769 | 0.3151 |
| Q85C_1 | 0.0766 | -0.1662 | 0.0084 | 0.0432 | -0.2507 | 0.0149 | 0.1794 | 0.1218 | -0.5445 | 0.0094 | 0.0709 | -0.3809 | -0.0325 | 0.143 | -0.0152 | 0.0639 | -0.0303 | -0.0655 | 0.1016 | -0.0101 | 0.3426 |
| Q87_1 | 0.0802 | 0.1929 | 0.2304 | 0.3334 | -0.4689 | 0.2031 | 0.0896 | 0.0966 | -0.0419 | -0.0308 | 0.0632 | 0.2888 | 0.0338 | 0.0962 | 0.1783 | 0.3242 | -0.0269 | 0.2663 | 0.0608 | -0.027 | 0.2451 |
| Q88B_1 | 0.0634 | 0.1266 | 0.1022 | 0.0949 | -0.4741 | 0.3042 | 0.0587 | 0.0694 | 0.0562 | -0.1175 | -0.0421 | 0.1844 | 0.363 | 0.1117 | -0.024 | -0.0459 | -0.0106 | -0.1385 | -0.0584 | 0.2701 | 0.3967 |
| Q89A_1 | -0.1873 | 0.0473 | 0.179 | -0.196 | -0.0869 | 0.3567 | 0.1339 | 0.2864 | 0.2635 | -0.0786 | -0.0148 | -0.0409 | 0.0603 | -0.0885 | 0.0439 | -0.0007 | -0.3473 | -0.1269 | 0.0605 | -0.0977 | 0.5291 |
| Q8A_1 | 0.0356 | -0.0679 | 0.0357 | 0.2061 | -0.1392 | -0.0548 | -0.1615 | 0.2091 | -0.0828 | 0.7161 | 0.0577 | 0.0295 | -0.0524 | 0.1031 | -0.112 | 0.0501 | 0.0621 | 0.1107 | 0.0761 | 0.0017 | 0.4614 |
| Q8B_1 | 0.1883 | 0.3066 | -0.1216 | 0.0918 | -0.3084 | -0.0587 | 0.0626 | 0.0571 | -0.1693 | 0.7377 | 0.1216 | -0.0006 | 0.0372 | 0.0752 | -0.017 | 0.0387 | 0.0448 | 0.206 | -0.0346 | 0.0457 | 0.2796 |
| Q8C_1 | -0.1013 | 0.2406 | -0.0573 | 0.1291 | -0.2496 | 0.0305 | 0.0467 | -0.0738 | 0.1543 | 0.6144 | 0.0067 | -0.2 | 0.1096 | 0.0055 | -0.2193 | 0.0047 | -0.038 | 0.0604 | 0.0449 | 0.094 | 0.3739 |
| Q8D_1 | 0.1114 | 0.1051 | 0.1414 | 0.0941 | 0.0028 | -0.1337 | 0.029 | 0.2432 | -0.2931 | 0.5585 | 0.1847 | -0.0303 | -0.1053 | 0.1226 | -0.11 | 0.0612 | 0.3212 | 0.169 | -0.2297 | -0.1868 | 0.4088 |
| Q8E_1 | 0.0931 | 0.2162 | -0.1822 | 0.1277 | -0.3736 | 0.0855 | 0.0191 | -0.0068 | -0.0214 | 0.4372 | -0.2678 | 0.0317 | 0.1804 | -0.1198 | 0.0039 | -0.1059 | -0.1709 | -0.1822 | 0.2314 | 0.0651 | 0.3098 |
| Q90A_1 | -0.2486 | 0.1655 | 0.0796 | -0.0805 | 0.1822 | -0.0358 | 0.1076 | 0.0098 | -0.4104 | -0.0397 | 0.2474 | -0.0777 | -0.0522 | 0.0867 | -0.1825 | 0.0833 | -0.0808 | 0.0939 | -0.0861 | -0.0225 | 0.611 |
| Q90B_1 | -0.0314 | 0.005 | 0.583 | 0.1183 | 0.2518 | 0.1166 | -0.1139 | -0.2957 | -0.1132 | 0.0002 | 0.048 | -0.0906 | 0.0585 | 0.0171 | -0.0365 | 0.3699 | 0.2091 | -0.0916 | 0.0597 | 0.0954 | 0.2357 |
| Q90C_1 | 0.2296 | -0.1 | 0.131 | 0.1952 | 0.1333 | 0.1322 | 0.0747 | -0.1108 | -0.1434 | 0.0518 | 0.0689 | 0.1015 | -0.053 | 0.1214 | 0.1377 | 0.2405 | -0.1978 | 0.0899 | 0.1332 | -0.0322 | 0.6411 |
| Q91A_1 | -0.0874 | 0.2337 | 0.1151 | 0.1474 | 0.4565 | -0.1132 | 0.1385 | -0.2411 | 0.0657 | -0.0865 | -0.0128 | 0.1454 | 0.2313 | -0.1143 | 0.0994 | 0.0262 | -0.0981 | 0.1501 | -0.0766 | 0.0955 | 0.3431 |
| Q91B_1 | -0.108 | 0.2349 | 0.0827 | 0.2339 | 0.6283 | -0.0889 | 0.0054 | -0.1893 | 0.1293 | -0.1955 | -0.0123 | 0.2417 | 0.1134 | 0.1339 | 0.021 | -0.1402 | -0.0853 | 0.0045 | -0.1008 | 0.0177 | 0.3402 |
| Q92_1 | 0.1595 | -0.1705 | -0.0213 | -0.152 | 0.0022 | -0.0824 | 0.118 | 0.0637 | -0.5993 | 0.0933 | 0.1669 | 0.2008 | -0.148 | 0.1311 | -0.0414 | 0.2638 | 0.1354 | -0.0024 | -0.1096 | 0.0553 | 0.4174 |
| Q94_1 | 0.0494 | -0.1481 | -0.0004 | -0.0424 | 0.245 | -0.0536 | 0.0767 | -0.0883 | -0.2209 | 0.0564 | 0.1666 | -0.0448 | 0.0665 | -0.1584 | 0.1995 | 0.1111 | -0.0611 | -0.07 | 0.2848 | -0.6683 | 0.3938 |

| GHANA | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q95A_1 | 0.2335 | -0.0609 | -0.1181 | 0.0402 | -0.5926 | 0.0371 | 0.0801 | 0.0733 | 0.0426 | 0.0443 | 0.1104 | 0.1345 | 0.093 | -0.0727 | -0.0428 | -0.1299 | -0.4749 | 0.0017 | 0.064 | 0.0356 | 0.2952 |
| Q95B_1 | 0.1675 | -0.1871 | -0.052 | 0.0927 | -0.31 | -0.0032 | -0.2097 | 0.2572 | -0.3164 | -0.0797 | 0.0318 | 0.2202 | -0.0405 | 0.0634 | -0.163 | -0.021 | -0.2596 | -0.1245 | 0.0303 | 0.0269 | 0.3057 |
| Q96_1 | -0.0104 | 0.0524 | 0.2395 | -0.1177 | 0.1169 | 0.1804 | -0.2868 | 0.1161 | -0.0501 | 0.0885 | 0.3011 | -0.0556 | -0.1179 | 0.0612 | -0.1312 | 0.2526 | 0.0017 | -0.1397 | -0.2026 | 0.2289 | 0.3549 |
| Q97_1 | 0.0023 | 0.1767 | 0.1944 | -0.1083 | 0.6624 | 0.1398 | -0.1126 | 0.0069 | -0.2434 | -0.2798 | 0.1642 | -0.1246 | -0.0683 | 0.0819 | 0.1073 | 0.1195 | 0.0729 | 0.0406 | 0.0083 | -0.1285 | 0.2693 |
| Q98B_1 | -0.2083 | 0.0994 | -0.0976 | 0.1325 | -0.2368 | 0.1416 | -0.0579 | -0.0691 | -0.0001 | 0.2413 | 0.0782 | -0.0439 | 0.1171 | -0.0935 | 0.1273 | 0.2017 | -0.0645 | -0.1741 | -0.1042 | -0.1137 | 0.7001 |
| Q9A_1 | -0.2585 | 0.2215 | 0.0099 | -0.0766 | -0.042 | -0.2127 | 0.2485 | 0.1864 | 0.1831 | 0.2818 | 0.1638 | -0.0274 | -0.0905 | 0.0139 | 0.2589 | -0.0033 | -0.1485 | 0.1281 | -0.1464 | -0.08 | 0.3244 |
| Q9B_1 | -0.2178 | 0.088 | 0.0525 | -0.0405 | 0.055 | -0.2168 | 0.3009 | 0.1453 | 0.0709 | 0.2335 | 0.127 | -0.0049 | -0.0246 | -0.1001 | 0.1888 | -0.0627 | -0.1114 | 0.0753 | -0.1802 | -0.1573 | 0.5046 |

| TANZANIA | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| EA_FAC_B_1 | 0.2282 | -0.0901 | 0.2645 | 0.1028 | -0.0407 | 0.0587 | 0.0907 | 0.1567 | -0.3057 | 0.0063 | 0.0087 | -0.0115 | 0.0182 | 0.0729 | -0.0723 | 0.1249 | -0.0065 | 0.1396 | -0.1198 | 0.2232 | 0.5804 |
| EA_FAC_C_1 | 0.009 | -0.0104 | 0.0678 | 0.0047 | 0.3829 | 0.1191 | 0.0365 | -0.0496 | -0.073 | 0.1162 | -0.0103 | 0.0084 | 0.1409 | 0.4022 | -0.1771 | 0.1997 | 0.0315 | 0.0224 | 0.1876 | -0.0886 | 0.5308 |
| EA_FAC_D_1 | 0.1618 | -0.1434 | 0.0558 | -0.0106 | 0.1461 | -0.0722 | -0.0521 | 0.1639 | -0.0018 | -0.017 | 0.0017 | -0.0603 | 0.1461 | 0.1678 | -0.2939 | 0.1305 | 0.0551 | 0.0755 | -0.0063 | 0.1854 | 0.7134 |
| EA_FAC_E_1 | 0.0922 | 0.1547 | -0.018 | 0.0253 | 0.0923 | 0.3656 | -0.0557 | 0.2436 | -0.1755 | 0.1703 | -0.0962 | 0.0823 | 0.1249 | 0.2037 | -0.0669 | -0.1125 | -0.1319 | 0.0376 | 0.0057 | -0.108 | 0.5848 |
| EA_ROAD_1 | -0.058 | 0.1421 | 0.3421 | -0.1136 | 0.0305 | 0.0886 | -0.0911 | -0.0783 | 0.0272 | 0.1801 | -0.0088 | -0.0635 | 0.2874 | 0.1668 | -0.0622 | -0.24 | -0.1019 | 0.0755 | -0.0013 | -0.2072 | 0.3907 |
| EA_SEC_A_1 | 0.0805 | -0.0565 | -0.0107 | 0.0067 | 0.2977 | 0.0446 | -0.1173 | 0.1507 | 0.0515 | -0.2633 | -0.0658 | 0.3104 | 0.0976 | -0.0867 | -0.0819 | -0.0743 | 0.0477 | 0.3165 | 0.1634 | 0.0003 | 0.4794 |
| EA_SEC_B_1 | 0.211 | -0.0505 | -0.062 | -0.0252 | 0.459 | -0.0017 | -0.0366 | -0.0165 | -0.0919 | -0.0775 | 0.0336 | -0.0442 | -0.0706 | -0.1118 | 0.0389 | -0.0234 | 0.069 | 0.4751 | 0.0601 | -0.0947 | 0.5068 |
| EA_SEC_C_1 | 0.015 | 0.0076 | -0.0014 | 0.0884 | -0.063 | -0.1781 | 0.0424 | -0.0036 | 0.0646 | -0.0399 | -0.009 | 0.0983 | 0.0608 | -0.0553 | 0.0574 | 0.0817 | -0.1173 | 0.8475 | -0.1053 | -0.0067 | 0.3449 |
| EA_SEC_D_1 | 0.0681 | -0.019 | 0.0292 | 0.0771 | -0.0079 | -0.2033 | 0.0936 | -0.0758 | 0.0194 | -0.0269 | -0.0248 | 0.0598 | 0.0379 | -0.0513 | 0.0605 | 0.01 | 0.0151 | 0.834 | -0.0847 | 0.0334 | 0.3467 |
| EA_SEC_E_1 | 0.1325 | -0.0322 | 0.0122 | -0.1411 | 0.6403 | 0.1349 | -0.0795 | 0.1366 | -0.0594 | -0.0456 | 0.004 | -0.0528 | -0.0627 | -0.1487 | -0.0947 | 0.0721 | -0.0223 | 0.1204 | 0.0419 | -0.2006 | 0.5188 |
| EA_SVC_A_1 | -0.0951 | -0.0918 | -0.0314 | 0.16 | 0.3747 | -0.0645 | 0.1501 | 0.1026 | 0.0084 | 0.0506 | 0.0293 | 0.0211 | 0.072 | 0.0872 | -0.0061 | -0.0843 | -0.0742 | 0.0629 | 0.3469 | 0.0276 | 0.5339 |
| EA_SVC_B_1 | -0.1099 | 0.0136 | 0.132 | -0.012 | 0.0717 | -0.0574 | -0.1372 | -0.0481 | 0.1154 | -0.0688 | 0.0567 | -0.0068 | 0.3146 | 0.1321 | -0.0141 | -0.107 | -0.1778 | 0.1283 | 0.1558 | -0.1594 | 0.6092 |
| EA_SVC_C_1 | -0.0471 | -0.0551 | -0.026 | -0.1587 | 0.3947 | -0.0109 | -0.0413 | 0.029 | -0.0006 | 0.1622 | -0.0347 | 0.147 | -0.0054 | -0.0447 | -0.0867 | -0.083 | -0.1456 | -0.0128 | 0.1114 | -0.2557 | 0.6228 |
| EA_SVC_D_1 | -0.0573 | -0.1278 | -0.0596 | 0.182 | 0.0499 | 0.1014 | 0.3371 | -0.1194 | 0.1624 | -0.0609 | 0.078 | 0.1102 | -0.2683 | 0.1922 | -0.1187 | -0.0627 | 0.0584 | -0.0769 | 0.4814 | -0.0002 | 0.4446 |
| Q1_1 | -0.1318 | 0.137 | -0.1755 | 0.1989 | -0.1086 | 0.3066 | 0.0291 | 0.0524 | 0.1143 | -0.0534 | -0.0422 | -0.0354 | 0.0674 | 0.0427 | -0.0377 | -0.0552 | -0.1187 | -0.1233 | 0.2161 | -0.0009 | 0.7448 |
| Q101_1 | 0.0149 | -0.1102 | -0.1387 | -0.0701 | -0.0604 | -0.0154 | -0.0634 | -0.1255 | -0.0982 | 0.0295 | 0.0101 | -0.0112 | -0.0381 | 0.1953 | 0.0063 | 0.0405 | 0.0334 | 0.0085 | 0.4143 | -0.1744 | 0.74 |
| Q104_1 | -0.0538 | -0.0003 | -0.033 | 0.0545 | 0.0745 | -0.044 | 0.1002 | -0.1119 | -0.0161 | 0.0146 | -0.1548 | -0.1688 | -0.2214 | 0.0626 | -0.0324 | 0.2987 | -0.0059 | -0.0046 | -0.1596 | 0.2403 | 0.6833 |
| Q105_1 | 0.1486 | 0.1853 | 0.082 | -0.205 | 0.014 | 0.1059 | 0.0729 | 0.0337 | 0.0044 | -0.1535 | 0.0623 | -0.0445 | -0.0425 | 0.0136 | -0.0271 | 0.1769 | -0.0181 | 0.0334 | -0.2819 | 0.0651 | 0.6995 |
| Q10A_1 | 0.0454 | 0.1673 | 0.2757 | 0.216 | -0.0485 | 0.123 | 0.0318 | -0.0313 | -0.1335 | 0.1534 | 0.1375 | -0.1365 | 0.1171 | 0.1872 | 0.0334 | -0.0316 | -0.3865 | -0.106 | -0.0559 | -0.0595 | 0.546 |
| Q10B_1 | 0.0629 | -0.0593 | 0.2048 | -0.0572 | -0.1574 | 0.2658 | 0.1702 | -0.066 | -0.0045 | 0.1392 | -0.0918 | 0.0736 | 0.0113 | 0.5952 | 0.2401 | -0.0781 | -0.1242 | -0.1198 | 0.0066 | -0.0067 | 0.4916 |
| Q10C_1 | 0.0992 | 0.004 | -0.1901 | 0.1106 | 0.1555 | -0.0784 | 0.3275 | 0.1681 | 0.0145 | 0.0289 | 0.0484 | 0.2096 | -0.0306 | -0.117 | 0.1011 | 0.1428 | -0.256 | -0.074 | 0.0285 | -0.0657 | 0.5379 |
| Q13A_1 | 0.1044 | -0.0105 | -0.1616 | 0.0678 | 0.1282 | -0.1155 | 0.1443 | 0.1402 | 0.1614 | 0.2599 | -0.044 | 0.0711 | 0.0375 | 0.022 | -0.0432 | -0.1668 | 0.0342 | -0.0321 | 0.0197 | 0.069 | 0.7406 |
| Q13B_1 | -0.0289 | 0.0408 | 0.0716 | 0.2558 | 0.388 | -0.1603 | 0.05 | -0.1094 | 0.1782 | 0.1259 | 0.0193 | 0.1101 | 0.0318 | 0.0255 | 0.006 | -0.2101 | 0.1531 | -0.0004 | 0.1812 | -0.0083 | 0.3415 |
| Q13C_1 | -0.0066 | 0.0476 | 0.1025 | 0.2099 | 0.4075 | -0.131 | 0.1127 | -0.0453 | 0.1554 | 0.0476 | -0.1022 | 0.0667 | -0.0461 | 0.1116 | 0.0675 | -0.2209 | 0.1626 | -0.0223 | 0.079 | 0.1529 | 0.4384 |
| Q13D_1 | 0.1396 | -0.0031 | 0.0103 | 0.0332 | 0.5512 | 0.0001 | 0.1019 | -0.0618 | 0.0782 | -0.1649 | 0.0441 | 0.1044 | 0.0155 | -0.0533 | 0.0363 | 0.0116 | 0.1723 | 0.083 | 0.0235 | -0.0036 | 0.5835 |
| Q14_1 | -0.0177 | 0.0727 | -0.0843 | 0.1614 | 0.0973 | -0.0018 | -0.1012 | 0.519 | 0.0433 | 0.0127 | 0.0125 | -0.2245 | 0.1144 | -0.1367 | 0.0524 | -0.0736 | 0.0086 | -0.0111 | -0.3132 | 0.0305 | 0.6217 |
| Q15_1 | -0.0461 | -0.0834 | -0.0008 | 0.3491 | 0.1356 | 0.1243 | 0.106 | 0.3601 | -0.0952 | 0.0371 | -0.0908 | 0.001 | -0.0245 | -0.0916 | 0.0217 | -0.0845 | -0.0898 | 0.1513 | -0.4488 | 0.118 | 0.5413 |
| Q16_1 | 0.3137 | 0.0773 | 0.1462 | -0.0825 | -0.0316 | -0.0542 | -0.0999 | -0.0082 | -0.0401 | 0.0767 | -0.2189 | -0.0072 | 0.099 | -0.0119 | -0.0067 | 0.1537 | 0.0327 | -0.0653 | -0.0683 | 0.0448 | 0.7651 |
| Q17A_1 | -0.1857 | -0.0477 | -0.1447 | -0.1391 | -0.2189 | -0.0477 | -0.2176 | 0.1306 | 0.0367 | 0.6123 | 0.0346 | -0.0286 | 0.0247 | -0.1308 | -0.0909 | 0.1022 | 0.0154 | -0.1707 | 0.076 | -0.0081 | 0.4473 |
| Q17B_1 | -0.28 | 0.1121 | -0.0685 | 0.0101 | -0.1592 | -0.0559 | -0.0642 | 0.1562 | -0.0318 | 0.6098 | -0.1005 | -0.0079 | -0.0805 | 0.013 | -0.0051 | 0.0479 | -0.1081 | -0.0428 | -0.031 | -0.0906 | 0.5141 |
| Q17C_1 | -0.3968 | 0.0284 | 0.0132 | -0.0671 | -0.167 | -0.0536 | -0.0749 | 0.1052 | -0.0236 | 0.6124 | 0.0031 | -0.0529 | -0.0267 | 0.0504 | 0.1156 | 0.0087 | -0.0539 | -0.1138 | -0.0033 | -0.0457 | 0.4405 |
| Q18_1 | -0.4951 | 0.149 | 0.067 | 0.0981 | -0.2218 | -0.1177 | 0.0283 | 0.0388 | 0.077 | 0.082 | 0.0643 | -0.1595 | 0.0914 | 0.1074 | 0.0391 | 0.0112 | 0.1901 | 0.0341 | 0.0095 | 0.0102 | 0.5776 |
| Q19_1 | -0.1236 | 0.1208 | 0.1679 | 0.0053 | -0.1329 | -0.1431 | -0.1611 | 0.1478 | -0.1958 | 0.2068 | 0.0914 | -0.1496 | -0.1505 | -0.16 | -0.0068 | -0.0678 | -0.0695 | -0.0252 | 0.1546 | 0.0773 | 0.7804 |
| Q20_1 | -0.0672 | 0.1726 | 0.0252 | 0.0603 | -0.0301 | -0.0044 | 0.0902 | -0.1803 | 0.1748 | 0.0857 | -0.0413 | 0.0509 | -0.0393 | -0.0019 | -0.1264 | 0.1435 | 0.0073 | -0.0803 | -0.036 | -0.089 | 0.8032 |
| Q21_1 | -0.1261 | -0.0984 | -0.2799 | -0.0243 | -0.0701 | 0.0338 | 0.2239 | 0.2305 | 0.0507 | 0.1837 | -0.0176 | 0.0576 | 0.0463 | 0.1682 | 0.3057 | 0.0593 | 0.1276 | 0.0041 | 0.0782 | -0.1783 | 0.5688 |
| Q22_1 | -0.4079 | 0.0777 | 0.1639 | 0.0118 | -0.1366 | 0.0786 | -0.0922 | -0.0106 | 0.1339 | 0.0792 | 0.1227 | -0.0776 | 0.0988 | 0.1655 | 0.0259 | -0.0112 | 0.1763 | -0.0084 | 0.0056 | -0.007 | 0.6639 |
| Q23_1 | 0.4781 | -0.1066 | 0.0554 | 0.0985 | -0.0645 | -0.1477 | 0.1567 | -0.0253 | 0.0475 | 0.0957 | -0.1054 | -0.0396 | 0.0162 | 0.1209 | -0.2196 | 0.0078 | -0.0245 | -0.1192 | -0.0652 | -0.1877 | 0.6151 |
| Q24_1 | -0.7408 | 0.0246 | 0.0773 | -0.0399 | -0.1358 | -0.003 | 0.1193 | -0.0646 | -0.0975 | 0.1264 | -0.03 | 0.0152 | -0.029 | 0.127 | 0.0219 | 0.0042 | 0.0653 | 0.0506 | 0.0059 | -0.0038 | 0.298 |
| Q25A_1 | 0.2254 | -0.0101 | -0.1909 | 0.0503 | 0.0462 | -0.1521 | 0.1022 | 0.5513 | -0.0681 | -0.0915 | -0.1517 | -0.0183 | -0.0184 | 0.0117 | -0.0388 | -0.1801 | -0.1921 | -0.1561 | 0.0458 | -0.0123 | 0.4559 |
| Q25B_1 | 0.269 | 0.0058 | -0.0579 | 0.2797 | -0.0338 | -0.0505 | -0.1429 | 0.5357 | 0.09 | -0.0142 | 0.1409 | -0.0156 | -0.1136 | -0.0489 | -0.1801 | -0.0187 | -0.0607 | -0.0136 | -0.0615 | -0.0508 | 0.4878 |
| Q26A_1 | -0.0641 | 0.006 | -0.0975 | 0.0388 | -0.1187 | -0.1887 | -0.055 | 0.7816 | -0.0836 | 0.1604 | -0.0112 | 0.0835 | 0.0129 | -0.1584 | -0.0238 | -0.0587 | 0.0192 | -0.0282 | -0.0496 | 0.1062 | 0.3579 |
| Q26B_1 | -0.1104 | -0.0901 | -0.1757 | 0.1208 | -0.1005 | -0.1662 | -0.0069 | 0.6674 | 0.0754 | 0.036 | -0.0265 | 0.0997 | -0.1003 | -0.1051 | 0.0372 | -0.0435 | 0.121 | 0.0167 | -0.1105 | 0.1124 | 0.4293 |
| Q26C_1 | 0.2867 | -0.0818 | -0.0821 | 0.1922 | 0.211 | 0.0376 | -0.1576 | 0.0677 | -0.0314 | -0.1729 | -0.1083 | 0.0624 | -0.1347 | 0.0604 | 0.1975 | -0.1001 | 0.1942 | -0.1105 | -0.078 | 0.0111 | 0.493 |
| Q26D_1 | 0.2024 | -0.1054 | -0.1357 | 0.3015 | 0.328 | 0.0563 | -0.2046 | 0.0622 | 0.1223 | -0.2264 | -0.1463 | -0.1293 | -0.2176 | 0.0298 | 0.1011 | -0.0537 | 0.0895 | -0.0419 | -0.0215 | 0.0167 | 0.3733 |
| Q26E_1 | 0.3883 | -0.1295 | -0.0557 | 0.2263 | 0.1641 | 0.0535 | -0.2404 | -0.0463 | 0.1029 | -0.2821 | -0.0624 | 0.0304 | -0.2568 | -0.0765 | -0.0192 | 0.0502 | -0.0385 | 0.0313 | 0.1869 | 0.0605 | 0.3391 |
| Q27_1 | -0.0834 | 0.2695 | -0.0366 | 0.1446 | -0.0317 | 0.0665 | 0.1978 | 0.2543 | -0.0633 | -0.1267 | 0.0122 | -0.0784 | -0.0368 | -0.0056 | 0.1694 | -0.1165 | -0.046 | 0.0684 | 0.1178 | -0.098 | 0.7591 |
| Q28_1 | 0.0103 | 0.0952 | 0.1236 | 0.2582 | -0.0752 | -0.0129 | 0.112 | 0.2755 | 0.0466 | 0.099 | -0.0288 | -0.1998 | 0.0208 | -0.1761 | 0.0841 | -0.0866 | 0.2695 | -0.1067 | -0.0341 | 0.1316 | 0.675 |
| Q29A_1 | -0.0441 | -0.0386 | 0.0247 | 0.2463 | -0.0626 | -0.0065 | 0.143 | 0.1964 | -0.02 | -0.0777 | 0.0028 | 0.0899 | 0.2438 | 0.0142 | 0.0103 | 0.0171 | -0.3131 | 0.0369 | -0.2974 | 0.0142 | 0.6807 |
| Q29B_1 | 0.2198 | -0.0544 | 0.0353 | 0.2987 | -0.0634 | 0.0982 | -0.1681 | 0.2669 | -0.0841 | 0.0027 | -0.0327 | 0.0465 | 0.1031 | -0.022 | 0.0624 | 0.1376 | 0.0786 | 0.0759 | -0.0859 | -0.0618 | 0.5956 |

| TANZANIA | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q29C_1 | 0.169 | -0.1283 | 0.0658 | 0.4294 | -0.0627 | 0.1127 | -0.2116 | 0.1841 | 0.0253 | -0.021 | 0.0118 | 0.0268 | -0.0125 | -0.0048 | -0.0778 | 0.1411 | 0.0521 | 0.1169 | -0.0541 | 0.0389 | 0.5728 |
| Q30A_1 | 0.0577 | 0.003 | 0.1075 | 0.6373 | 0.0591 | 0.0241 | 0.1086 | 0.0581 | -0.0166 | -0.0767 | 0.0559 | -0.2136 | -0.1166 | -0.1694 | 0.1195 | 0.0424 | -0.145 | 0.1377 | 0.0035 | 0.0117 | 0.4769 |
| Q30B_1 | 0.2077 | -0.1118 | 0.1043 | 0.6206 | -0.0047 | 0.0452 | 0.0565 | -0.0242 | -0.0167 | -0.1639 | 0.0203 | -0.0902 | -0.0262 | -0.0943 | -0.0401 | 0.0373 | -0.0204 | -0.0598 | 0.0496 | 0.0453 | 0.4617 |
| Q30C_1 | -0.017 | 0.0162 | 0.1535 | 0.7833 | -0.028 | 0.0329 | 0.2062 | 0.1743 | -0.1121 | -0.0387 | 0.1866 | 0.0567 | -0.0816 | -0.0907 | -0.1536 | -0.1007 | 0.0054 | -0.0943 | -0.0214 | 0.205 | 0.4158 |
| Q30D_1 | 0.0499 | 0.0158 | 0.1282 | 0.828 | -0.0059 | 0.093 | 0.1384 | 0.0715 | 0.0292 | -0.011 | 0.1199 | 0.0253 | -0.0661 | 0.0358 | -0.0503 | 0.0112 | 0.0047 | 0.1454 | -0.0566 | 0.2179 | 0.3101 |
| Q31A_1 | 0.166 | 0.0164 | -0.0856 | 0.1964 | 0.1508 | 0.1031 | -0.1081 | -0.1344 | 0.0438 | 0.0339 | -0.1049 | -0.2178 | -0.0309 | 0.1348 | 0.1343 | 0.1627 | 0.2629 | -0.0408 | 0.1061 | 0.1052 | 0.6043 |
| Q31C_1 | 0.2688 | -0.0808 | 0.0467 | 0.3227 | 0.2064 | 0.081 | -0.0005 | -0.2356 | -0.0281 | -0.0532 | 0.0856 | -0.0189 | 0.0849 | 0.024 | 0.215 | 0.1078 | -0.0515 | 0.0009 | -0.0119 | 0.1226 | 0.5182 |
| Q32_1 | -0.3091 | -0.2579 | 0.1923 | -0.0504 | -0.0092 | 0.0654 | 0.2786 | -0.0091 | -0.1045 | 0.0938 | -0.1167 | -0.1165 | 0.1239 | -0.0114 | 0.0316 | 0.0756 | 0.1335 | 0.0767 | 0.007 | 0.0337 | 0.5606 |
| Q33_1 | -0.0627 | 0.1487 | 0.1097 | 0.0775 | 0.0524 | -0.1245 | -0.0151 | 0.0773 | 0.1976 | 0.1841 | 0.0622 | -0.1801 | 0.1554 | 0.0412 | 0.0008 | 0.019 | -0.0039 | 0.1861 | -0.0844 | 0.0478 | 0.7384 |
| Q34_1 | 0.1643 | 0.0283 | 0.0923 | 0.1481 | 0.1234 | -0.1104 | 0.0001 | 0.0067 | -0.1487 | 0.0629 | 0.0265 | -0.0107 | 0.1453 | -0.038 | 0.0847 | -0.1816 | -0.1356 | -0.0412 | -0.25 | 0.0869 | 0.7292 |
| Q35_1 | -0.6238 | -0.0006 | 0.1042 | 0.0164 | -0.1584 | -0.1707 | 0.1195 | 0.135 | -0.1049 | 0.0993 | -0.0569 | -0.1415 | -0.2111 | 0.0175 | -0.0647 | -0.0768 | 0.0176 | -0.1192 | 0.0812 | -0.0615 | 0.3989 |
| Q36_1 | -0.1666 | -0.0989 | -0.0958 | -0.2309 | 0.1014 | 0.0783 | 0.1325 | 0.0207 | -0.068 | 0.1207 | 0.066 | 0.0678 | -0.0266 | -0.0142 | 0.1961 | 0.0984 | -0.1422 | -0.0633 | -0.0005 | 0.0865 | 0.6796 |
| Q37_1 | -0.2209 | 0.0239 | -0.0542 | -0.0098 | 0.046 | 0.009 | 0.0326 | 0.163 | -0.0348 | 0.0043 | -0.0445 | -0.1221 | 0.0132 | 0.0505 | -0.0055 | -0.0095 | 0.03 | -0.0948 | -0.084 | 0.0508 | 0.8899 |
| Q38_1 | 0.2632 | 0.1673 | 0.0557 | -0.0661 | 0.0196 | 0.0241 | -0.0167 | -0.1045 | -0.0811 | 0.3422 | -0.0285 | 0.0009 | -0.1686 | 0.0626 | 0.1134 | 0.0159 | -0.0854 | 0.1264 | -0.0695 | 0.1544 | 0.6821 |
| Q39_1 | 0.3914 | 0.0971 | 0.1442 | -0.1875 | -0.0299 | -0.03 | 0.0577 | -0.0374 | 0.184 | 0.1101 | -0.0786 | -0.0002 | 0.2782 | 0.1105 | 0.0886 | -0.0367 | 0.0192 | 0.1004 | -0.1228 | 0.1502 | 0.6154 |
| Q3A_1 | 0.1808 | 0.109 | 0.0011 | -0.0219 | 0.0762 | 0.0956 | -0.0178 | -0.0782 | 0.6909 | 0.0078 | 0.0163 | -0.0312 | -0.0167 | 0.0439 | -0.0544 | 0.1159 | 0.087 | 0.0286 | -0.0158 | -0.07 | 0.3909 |
| Q3B_1 | 0.134 | 0.1029 | -0.1214 | -0.1144 | 0.0916 | 0.0598 | 0.012 | 0.0013 | 0.7813 | -0.1065 | 0.1247 | -0.0147 | 0.0459 | -0.0908 | -0.0207 | -0.0615 | 0.1226 | 0.0265 | 0.0324 | -0.0106 | 0.3473 |
| Q4_1 | 0.0898 | 0.0958 | -0.0075 | 0.0168 | 0.0915 | -0.0324 | -0.0683 | 0.0259 | 0.522 | -0.094 | -0.0135 | -0.0147 | 0.0271 | -0.026 | 0.0652 | -0.1201 | 0.223 | -0.0042 | 0.0772 | 0.0498 | 0.5897 |
| Q40_1 | -0.383 | 0.0207 | -0.0355 | -0.067 | -0.0416 | 0.0526 | 0.1012 | 0.101 | -0.0442 | 0.1754 | 0.0932 | 0 | -0.0645 | 0.0708 | 0.2057 | -0.0619 | 0.112 | -0.0267 | 0.0584 | -0.0515 | 0.7123 |
| Q41_1 | 0.3383 | -0.002 | 0.0477 | 0.0537 | 0.0204 | -0.0367 | 0.0931 | -0.025 | 0.2847 | 0.1589 | 0.0575 | -0.1512 | 0.0531 | -0.0226 | 0.0056 | 0.0452 | -0.0678 | -0.0677 | 0.076 | 0.3266 | 0.5431 |
| Q42_1 | 0.0742 | 0.0146 | 0.1945 | 0.2189 | -0.1051 | 0.187 | 0.2008 | 0.126 | 0.1065 | 0.0337 | 0.0996 | 0.1475 | 0.0003 | -0.1558 | -0.0704 | 0.1587 | 0.4211 | -0.0127 | 0.031 | 0.1424 | 0.5226 |
| Q43_1 | 0.0341 | -0.0853 | 0.2806 | 0.2136 | -0.0372 | 0.1972 | 0.1857 | 0.1423 | 0.0752 | -0.0609 | 0.0989 | 0.054 | -0.0746 | -0.1396 | -0.2517 | 0.1331 | 0.2838 | -0.1518 | 0.0195 | 0.206 | 0.5375 |
| Q46A_1 | -0.063 | -0.1475 | 0.0253 | -0.0416 | -0.1118 | 0.0327 | 0.0301 | 0.1313 | 0.179 | 0.0639 | -0.1587 | 0.1902 | 0.0879 | -0.0818 | -0.4152 | 0.2766 | -0.0121 | -0.0361 | 0.0373 | -0.1475 | 0.5727 |
| Q46C_1 | 0.025 | 0.2083 | 0.1667 | -0.0184 | 0.068 | 0.0261 | -0.3212 | 0.0072 | -0.1142 | 0.0429 | -0.2937 | -0.1935 | -0.0192 | -0.0483 | 0.0629 | -0.0587 | 0.2164 | -0.0177 | 0.0094 | -0.0585 | 0.4981 |
| Q46D_1 | -0.4392 | 0.0558 | 0.1483 | 0.1603 | -0.0599 | -0.0675 | 0.0435 | 0.0924 | 0.1316 | 0.0507 | 0.1021 | -0.0673 | -0.1361 | 0.0262 | -0.3833 | 0.1273 | -0.1952 | 0.1023 | 0.1926 | -0.1094 | 0.5345 |
| Q48A_1 | -0.419 | -0.0258 | 0.1029 | 0.2687 | 0.1704 | 0.116 | -0.1801 | -0.267 | -0.0787 | 0.2162 | 0.093 | -0.1551 | 0.0962 | -0.0191 | 0.0786 | 0.2289 | 0.0791 | 0.0426 | -0.2131 | -0.0217 | 0.4375 |
| Q48B_1 | -0.4703 | -0.1547 | -0.0155 | 0.1326 | 0.071 | 0.0139 | 0.0533 | -0.1318 | -0.0993 | 0.2027 | 0.001 | -0.0012 | 0.1023 | -0.0147 | 0.0432 | 0.2383 | 0.2219 | -0.0101 | -0.0342 | 0.0084 | 0.5657 |
| Q48C_1 | -0.4787 | 0.0106 | -0.091 | 0.0647 | 0.2599 | -0.0146 | 0.0296 | -0.0797 | -0.126 | 0.1203 | -0.0413 | 0.1357 | 0.1795 | -0.0478 | 0.0135 | 0.3912 | 0.1693 | -0.0379 | -0.1057 | -0.0136 | 0.4439 |
| Q49_1 | 0.5569 | -0.0968 | 0.0669 | 0.2284 | -0.0216 | 0.0149 | 0.1042 | -0.1336 | 0.0603 | 0.0219 | -0.1206 | 0.0728 | -0.0682 | 0.1343 | 0.0253 | 0.0252 | -0.0278 | 0.0776 | 0.0706 | 0.1334 | 0.5181 |
| Q50_1 | 0.0571 | 0.1418 | 0.2191 | 0.0256 | -0.0628 | -0.0411 | -0.0846 | -0.093 | 0.0113 | -0.05 | 0.0268 | -0.4111 | 0.0202 | -0.0641 | -0.0866 | -0.1513 | 0.051 | 0.0011 | 0.1358 | 0.0713 | 0.6362 |
| Q51_1 | 0.1111 | 0.1677 | 0.1284 | 0.2717 | -0.02 | -0.1161 | -0.0223 | -0.1643 | -0.0109 | 0.2795 | 0.0381 | -0.3454 | -0.2373 | -0.1112 | -0.052 | -0.0451 | -0.0067 | 0.1841 | 0.0454 | -0.0284 | 0.5286 |
| Q52B_1 | 0.5282 | -0.0192 | -0.1 | -0.0416 | -0.1227 | -0.1113 | -0.1026 | -0.1131 | 0.1997 | 0.0396 | 0.0332 | -0.1861 | 0.1396 | 0.0419 | -0.0197 | -0.1293 | 0.0549 | -0.027 | 0.1168 | 0.0403 | 0.5895 |
| Q52C_1 | 0.6519 | -0.0138 | 0.0181 | 0.0055 | 0.0776 | -0.1313 | -0.1571 | -0.0808 | 0.0092 | -0.1181 | 0.0569 | -0.1049 | -0.0035 | 0.0698 | 0.0115 | -0.0935 | 0.0046 | 0.0891 | 0.0379 | 0.0726 | 0.4175 |
| Q52D_1 | 0.4137 | -0.0515 | -0.127 | -0.1403 | 0.0178 | -0.081 | 0.0031 | -0.041 | 0.0657 | -0.1098 | 0.0483 | -0.0634 | 0.0684 | -0.0818 | 0.029 | -0.0887 | 0.1324 | 0.0476 | 0.1458 | -0.0756 | 0.7699 |
| Q52E_1 | 0.778 | -0.0878 | 0.0103 | -0.0216 | 0.0171 | -0.1071 | -0.1656 | 0.0384 | -0.0136 | -0.0423 | -0.0777 | -0.0442 | 0.2149 | 0.0805 | 0.0066 | -0.1059 | 0.0023 | 0.1044 | -0.028 | 0.085 | 0.3122 |
| Q53_1 | 0.1853 | 0.1365 | 0.2477 | -0.0852 | -0.0636 | 0.1095 | 0.0792 | -0.072 | -0.3054 | 0.0384 | -0.1185 | 0.0283 | 0.2984 | -0.0972 | 0.2015 | -0.0353 | 0.1095 | -0.0543 | 0.1617 | 0.0973 | 0.5676 |
| Q54_1 | 0.0186 | -0.0485 | -0.1237 | -0.01 | -0.0396 | 0.0647 | 0.1811 | 0.1165 | -0.2311 | 0.2776 | 0.0176 | 0.1256 | -0.0451 | -0.1251 | -0.0345 | -0.0173 | 0.0442 | -0.2317 | 0.1064 | 0.167 | 0.6013 |
| Q56B_1 | 0.5052 | -0.0118 | 0.0244 | -0.0472 | -0.0734 | -0.032 | 0.0509 | 0.1211 | -0.0112 | -0.1193 | 0.1066 | -0.0959 | 0.2021 | 0.253 | -0.0275 | -0.0972 | 0.0147 | 0.0231 | -0.0005 | -0.1792 | 0.5641 |
| Q56C_1 | 0.4518 | 0.094 | 0.0506 | -0.062 | -0.0747 | -0.0309 | 0.0355 | 0.1507 | -0.0575 | 0.0518 | 0.1912 | -0.0495 | 0.062 | 0.2014 | 0.0958 | -0.049 | 0.1055 | -0.0471 | -0.0736 | -0.1956 | 0.5795 |
| Q56D_1 | 0.4367 | 0.0008 | -0.2242 | 0.079 | -0.074 | -0.0882 | 0.0167 | 0.0213 | -0.1359 | 0.0184 | 0.1891 | -0.0417 | 0.0711 | 0.2104 | 0.1008 | 0.0224 | 0.2896 | -0.0737 | 0.1681 | -0.2117 | 0.4912 |
| Q56E_1 | 0.1009 | -0.0145 | -0.1309 | 0.2414 | -0.0097 | -0.0461 | 0.1306 | -0.01 | -0.1162 | 0.0667 | 0.1022 | 0.0557 | -0.0968 | 0.2707 | 0.0227 | 0.0717 | 0.2029 | 0.1081 | 0.026 | -0.2347 | 0.6924 |
| Q56F_1 | -0.0869 | 0.0038 | -0.051 | 0.0569 | 0.089 | -0.0874 | 0.1798 | -0.0471 | -0.0128 | -0.1085 | 0.3572 | 0.1132 | -0.1291 | 0.2096 | -0.1527 | 0.1371 | -0.0367 | -0.0049 | 0.0111 | -0.0984 | 0.647 |
| Q56G_1 | 0.3532 | -0.0102 | -0.1356 | 0.0251 | 0.1072 | -0.151 | 0.2241 | 0.1374 | -0.0193 | -0.1482 | 0.11 | -0.0645 | 0.1515 | 0.1557 | -0.1058 | 0.0053 | 0.0905 | -0.079 | -0.0433 | 0.1492 | 0.6466 |
| Q56H_1 | 0.77 | -0.0837 | 0.0416 | 0.0621 | -0.0701 | -0.0104 | 0.0879 | 0.0082 | 0.0995 | -0.1054 | -0.0858 | 0.0172 | 0.1588 | 0.0375 | -0.0347 | -0.0856 | 0.1164 | 0.0345 | -0.0684 | 0.0191 | 0.366 |
| Q56I_1 | 0.4835 | -0.2157 | -0.1058 | -0.0002 | -0.0682 | -0.1041 | 0.1472 | 0.1447 | 0.1226 | -0.0146 | -0.1366 | 0.2037 | 0.1794 | 0.047 | -0.0455 | 0.0357 | -0.0474 | 0.125 | 0.0056 | 0.0039 | 0.6292 |
| Q59A_1 | -0.2122 | 0.068 | -0.02 | -0.0001 | 0.0179 | 0.5582 | -0.0226 | -0.1062 | -0.0537 | 0.0773 | -0.1872 | 0.0321 | -0.1269 | 0.0404 | -0.0164 | -0.027 | 0.1427 | -0.1174 | -0.0175 | 0.0339 | 0.5252 |
| Q59B_1 | -0.1015 | 0.1572 | -0.0236 | -0.0178 | -0.0377 | 0.6532 | -0.1155 | -0.0322 | 0.0754 | 0.0021 | -0.0397 | 0.0224 | -0.108 | 0.032 | 0.1442 | -0.0135 | 0.0853 | -0.0238 | -0.1541 | 0.0778 | 0.4538 |
| Q59C_1 | -0.0494 | 0.1031 | 0.085 | 0.0692 | 0.0049 | 0.7343 | -0.0955 | -0.1666 | 0.0469 | 0.0423 | 0.0035 | 0.0722 | -0.0688 | 0.0107 | 0.0154 | -0.0153 | -0.0279 | -0.1347 | 0.0114 | 0.1059 | 0.3809 |
| Q59D_1 | 0.066 | 0.1671 | 0.0551 | -0.0135 | 0.0467 | 0.6477 | -0.0261 | -0.0886 | 0.0349 | -0.1679 | -0.1199 | -0.0633 | -0.0785 | 0.1476 | 0.0388 | 0.1473 | 0.0511 | -0.0524 | 0.0081 | -0.1028 | 0.4217 |

| TANZANIA | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q59E_1 | -0.0069 | 0.1413 | 0.003 | 0.0803 | -0.0448 | 0.6934 | 0.032 | -0.0994 | -0.0054 | -0.1274 | -0.0971 | -0.0599 | -0.0321 | 0.0848 | 0.1673 | 0.005 | -0.0005 | -0.1624 | 0.0733 | -0.0471 | 0.4601 |
| Q59F_1 | -0.1295 | 0.0305 | -0.0053 | 0.1237 | 0.0019 | 0.6098 | -0.0675 | -0.0956 | 0.0755 | -0.0482 | -0.0888 | -0.1207 | -0.1377 | -0.0182 | -0.1181 | 0.0945 | -0.0276 | -0.1623 | 0.0598 | 0.0921 | 0.5228 |
| Q59G_1 | -0.0123 | 0.0356 | 0.0227 | -0.0142 | 0.0483 | 0.1046 | 0.1294 | -0.0276 | 0.0431 | -0.2241 | -0.0593 | -0.0506 | 0.0685 | 0.026 | 0.0081 | -0.1283 | 0.0288 | 0.1613 | -0.3812 | -0.092 | 0.7506 |
| Q59H_1 | 0.0345 | 0.106 | 0.0514 | 0.1361 | -0.0086 | 0.5344 | -0.0021 | -0.1671 | 0.1399 | -0.1767 | -0.049 | -0.2042 | 0.0086 | -0.0163 | -0.1108 | -0.0372 | -0.1944 | -0.0069 | -0.0833 | -0.0205 | 0.4773 |
| Q59J_1 | 0.0717 | 0.3091 | -0.0265 | 0.1228 | -0.083 | 0.4146 | 0.007 | -0.1823 | 0.1315 | -0.0293 | -0.0657 | -0.2054 | 0.0235 | 0.0081 | 0.0626 | -0.0297 | -0.0735 | 0.056 | -0.1274 | -0.0437 | 0.4521 |
| Q5A_1 | 0.0511 | -0.1716 | -0.0749 | 0.0521 | -0.0949 | 0.0574 | -0.2984 | 0.1142 | 0.4548 | 0.2109 | -0.0824 | -0.0249 | 0.3263 | -0.2244 | 0.0965 | 0.1122 | -0.1083 | 0.1942 | -0.0301 | 0.0187 | 0.4052 |
| Q5B_1 | 0.0796 | -0.0121 | 0.1221 | -0.0451 | -0.0468 | -0.0539 | -0.2343 | 0.0979 | 0.3762 | 0.1606 | -0.0983 | 0.101 | 0.3691 | -0.0901 | 0.0353 | 0.0986 | -0.1098 | 0.098 | 0.0229 | 0.0774 | 0.5267 |
| Q60A_1 | 0.0173 | 0.022 | -0.0834 | -0.0534 | 0.0855 | -0.2015 | -0.211 | -0.0266 | 0.0906 | 0.0522 | 0.4846 | 0.067 | -0.1363 | 0.1248 | 0.0098 | 0.1644 | -0.0427 | 0.0731 | -0.0389 | 0.0391 | 0.5807 |
| Q60B_1 | -0.0116 | 0.0685 | 0.0176 | 0.0037 | 0.1379 | -0.0005 | -0.2412 | -0.0046 | -0.0283 | -0.0512 | 0.6288 | 0.0162 | -0.0636 | 0.0207 | 0.0652 | -0.0671 | -0.0504 | 0.0248 | 0.0003 | 0.0077 | 0.5382 |
| Q60C_1 | -0.0048 | 0.0414 | -0.0834 | 0.2124 | 0.0408 | -0.047 | -0.0264 | -0.0241 | -0.0726 | 0.0059 | 0.6635 | -0.0799 | 0.0485 | -0.0601 | -0.0368 | 0.0204 | -0.2103 | 0.0681 | -0.0392 | -0.1066 | 0.533 |
| Q60D_1 | 0.1448 | 0.1026 | 0.0765 | 0.0877 | 0.0712 | -0.0394 | -0.1017 | -0.0961 | 0.0878 | 0.0171 | 0.6613 | -0.1517 | -0.0818 | 0.0104 | -0.0016 | 0.0126 | -0.0474 | -0.0399 | 0.1205 | -0.0478 | 0.413 |
| Q60E_1 | -0.1137 | -0.052 | 0.012 | 0.1412 | 0.1844 | -0.1286 | 0.0161 | 0.0111 | -0.16 | -0.0068 | 0.5368 | -0.0169 | 0.0498 | -0.1644 | -0.0032 | -0.0724 | 0.0678 | 0.0612 | 0.0831 | 0.1493 | 0.5701 |
| Q60F_1 | -0.1103 | -0.0541 | -0.1152 | 0.105 | 0.0592 | -0.1726 | 0.1157 | -0.022 | 0.1031 | -0.0491 | 0.6395 | 0.0331 | 0.0811 | -0.1842 | 0.0398 | -0.0602 | 0.0228 | -0.0917 | -0.0302 | -0.0264 | 0.4787 |
| Q60G_1 | -0.1455 | -0.1495 | -0.0063 | 0.0667 | 0.0058 | -0.2303 | -0.1155 | 0.0525 | 0.0622 | -0.0325 | 0.5317 | -0.0774 | 0.0911 | -0.0612 | 0.0492 | 0.0045 | 0.1316 | -0.1543 | 0.0769 | -0.0584 | 0.5551 |
| Q61A_1 | -0.0367 | 0.0799 | 0.4899 | 0.1125 | 0.0776 | -0.1099 | -0.0772 | 0.0872 | -0.0954 | -0.1689 | 0.0459 | 0.2468 | -0.0026 | 0.1373 | 0.1885 | 0.0795 | -0.0131 | -0.1213 | -0.0744 | -0.0417 | 0.448 |
| Q61B_1 | 0.0698 | -0.0192 | 0.394 | 0.1275 | 0.0638 | -0.1424 | -0.1136 | 0.1099 | -0.0856 | -0.2817 | -0.0049 | 0.0825 | -0.1547 | 0.1116 | 0.0992 | -0.1062 | -0.0472 | -0.1119 | -0.0345 | -0.0445 | 0.4365 |
| Q61C_1 | -0.1411 | -0.0657 | 0.4589 | 0.0125 | -0.0421 | -0.1223 | -0.1225 | 0.1744 | 0.0598 | -0.2349 | 0.0197 | 0.1079 | -0.1249 | 0.0769 | 0.2503 | -0.1508 | -0.0779 | -0.1074 | -0.0536 | 0.0172 | 0.4029 |
| Q61D_1 | -0.0247 | 0.124 | 0.4707 | 0.0311 | 0.0259 | -0.1381 | -0.2117 | 0.108 | -0.0956 | -0.1473 | -0.0502 | 0.1301 | -0.0938 | 0.0207 | 0.0859 | 0.0005 | -0.2191 | -0.0412 | -0.1218 | 0.0203 | 0.4906 |
| Q61E_1 | 0.2573 | -0.0492 | 0.3164 | 0.0501 | -0.0276 | -0.0939 | -0.2115 | 0.0963 | 0.0805 | -0.1376 | 0.0012 | 0.1104 | -0.0796 | -0.0299 | 0.1371 | 0.1222 | 0.0202 | -0.0641 | 0.0064 | 0.0637 | 0.5301 |
| Q61F_1 | 0.1786 | -0.0482 | 0.209 | 0.0417 | 0.0406 | -0.0302 | -0.1357 | 0.0825 | 0.0927 | -0.3977 | 0.0478 | 0.1459 | -0.0981 | 0.082 | 0.0851 | -0.0085 | -0.0213 | -0.1148 | -0.039 | 0.0804 | 0.4883 |
| Q62A_1 | -0.074 | 0.2248 | -0.0604 | 0.2232 | 0.0901 | -0.2106 | 0.1523 | 0.2637 | 0.1462 | -0.0398 | -0.2648 | -0.1879 | -0.1111 | 0.1254 | -0.0646 | 0.1512 | -0.0614 | 0.0983 | 0.1188 | 0.1811 | 0.5895 |
| Q62B_1 | 0.0069 | 0.3389 | 0.011 | 0.0483 | 0.0467 | -0.2679 | 0.0429 | 0.1245 | -0.2617 | -0.0867 | -0.2949 | -0.1575 | -0.0648 | -0.0918 | 0.0097 | 0.142 | -0.1486 | 0.0249 | 0.076 | 0.0109 | 0.6412 |
| Q65A_1 | -0.0091 | 0.5045 | 0.0876 | -0.0585 | 0.0542 | 0.1472 | 0.017 | 0.0873 | 0.0868 | 0.091 | -0.0725 | 0.0969 | -0.02 | -0.1024 | 0.1261 | 0.1565 | 0.2871 | 0.0092 | -0.1758 | -0.1184 | 0.4371 |
| Q65B_1 | 0.0031 | 0.6379 | -0.0029 | -0.0971 | 0.1211 | 0.1715 | 0.1492 | 0.0908 | 0.0389 | 0.0422 | 0.001 | 0.08 | -0.0592 | -0.0801 | 0.1277 | 0.1666 | 0.1009 | -0.0925 | -0.0979 | -0.0025 | 0.4477 |
| Q65C_1 | 0.135 | 0.5996 | -0.08 | 0.0131 | -0.009 | 0.0972 | -0.0655 | 0.0676 | 0.0575 | 0.1675 | 0.02 | 0.0021 | 0.0624 | -0.0621 | 0.3593 | 0.0643 | 0.0075 | 0.1091 | -0.2523 | -0.0718 | 0.3673 |
| Q65D_1 | 0.3109 | 0.4045 | -0.0174 | -0.1265 | 0.1807 | 0.205 | -0.1174 | 0.1388 | 0.067 | 0.0655 | 0.1317 | -0.1184 | 0.0733 | -0.1762 | 0.1315 | 0.1208 | -0.0417 | -0.0261 | -0.149 | -0.2069 | 0.4503 |
| Q65E_1 | 0.156 | 0.5751 | -0.1083 | -0.0396 | -0.0151 | 0.0098 | 0.1305 | 0.0794 | 0.0972 | 0.0287 | 0.0749 | -0.0211 | -0.0292 | -0.2215 | 0.0974 | 0.0652 | -0.0114 | -0.0926 | -0.0067 | -0.1106 | 0.5174 |
| Q65F_1 | -0.1576 | 0.545 | 0.0614 | 0.0933 | -0.0267 | 0.0633 | 0.1367 | 0.0082 | 0.0283 | 0.0123 | 0.0743 | 0.0055 | 0.0214 | -0.0767 | -0.1922 | 0.0282 | 0.002 | 0.167 | 0.096 | 0.071 | 0.4997 |
| Q65G_1 | -0.1829 | 0.6282 | 0.0035 | -0.0612 | 0.0433 | 0.0703 | 0.0632 | -0.1419 | 0.1153 | 0.0992 | 0.0787 | 0.072 | 0.0203 | -0.0376 | -0.0035 | -0.0293 | -0.163 | -0.0466 | -0.0055 | 0.1616 | 0.408 |
| Q65H_1 | -0.1065 | 0.6215 | -0.1462 | 0.0021 | -0.0114 | 0.0161 | 0.1129 | -0.1195 | 0.0279 | 0.2558 | 0.0372 | 0.0609 | -0.0573 | -0.0254 | 0.0483 | -0.0108 | -0.0786 | 0.1024 | 0.0335 | 0.1574 | 0.4077 |
| Q65I_1 | -0.0525 | 0.5997 | -0.0394 | -0.1301 | 0.0498 | 0.0113 | 0.1165 | -0.0391 | 0.2063 | -0.0536 | -0.0973 | 0.0134 | -0.0163 | 0.0255 | 0.0451 | 0.0393 | -0.148 | 0.1108 | -0.1024 | -0.1542 | 0.5082 |
| Q65J_1 | 0.0603 | 0.6128 | -0.0456 | 0.0075 | 0.0196 | 0.0432 | 0.0776 | -0.0465 | 0.0941 | 0.0356 | 0.0738 | 0.0077 | -0.1081 | -0.2216 | -0.0147 | 0.0586 | 0.0033 | -0.1415 | -0.0333 | -0.082 | 0.4521 |
| Q65K_1 | 0.091 | 0.5592 | 0.1318 | 0.0645 | -0.0947 | 0.076 | -0.0846 | -0.0194 | 0.0496 | 0.0316 | -0.0565 | -0.1105 | 0 | -0.2014 | -0.0538 | -0.0481 | 0.0724 | -0.0695 | -0.1028 | 0.1009 | 0.4132 |
| Q65L_1 | -0.1882 | 0.5987 | -0.0475 | 0.0053 | -0.0045 | 0.0671 | 0.0619 | -0.0552 | -0.1016 | -0.0826 | -0.0874 | -0.0645 | 0.0978 | -0.1603 | -0.0111 | -0.0598 | 0.0589 | -0.038 | -0.0225 | 0.0207 | 0.4593 |
| Q65M_1 | -0.4268 | 0.4944 | -0.1897 | -0.0366 | -0.0635 | -0.0723 | 0.0369 | -0.0312 | -0.1723 | -0.0303 | -0.1699 | -0.0538 | -0.0107 | -0.0943 | 0.0369 | 0.0278 | -0.0449 | 0.0654 | 0.0659 | 0.1242 | 0.3958 |
| Q65N_1 | -0.1961 | 0.6785 | 0.0722 | -0.0104 | -0.0815 | 0.0715 | -0.0082 | -0.0746 | 0.0022 | -0.0726 | -0.021 | -0.024 | 0.0517 | 0.1377 | -0.0302 | -0.0092 | -0.0408 | 0.1122 | -0.0153 | -0.0251 | 0.4063 |
| Q65O_1 | 0.035 | 0.5854 | -0.0717 | 0.0282 | -0.1463 | -0.0278 | -0.0998 | -0.0649 | -0.037 | 0.1782 | -0.1074 | -0.0101 | -0.0626 | 0.0682 | 0.0152 | 0.0527 | 0.1444 | 0.0937 | -0.1312 | -0.0871 | 0.4532 |
| Q65P_1 | -0.4837 | 0.4011 | 0.0824 | -0.109 | -0.1286 | -0.1022 | 0.1098 | -0.0316 | -0.0231 | -0.0264 | -0.0507 | 0.0523 | -0.0331 | -0.0252 | -0.0533 | 0.1782 | 0.0387 | 0.1703 | 0.0368 | 0.0733 | 0.4562 |
| Q66A_1 | -0.162 | 0.6249 | 0.0031 | -0.0254 | 0.0896 | 0.1616 | -0.2066 | 0.1549 | 0.1287 | -0.0833 | 0.1241 | 0.0134 | 0.0263 | 0.1281 | -0.102 | 0.0759 | 0.1231 | -0.0165 | 0.0739 | 0.1341 | 0.4096 |
| Q66B_1 | -0.0818 | 0.6475 | -0.116 | 0.003 | 0.0656 | 0.091 | -0.1912 | -0.0268 | -0.0322 | -0.0722 | 0.0663 | 0.1143 | 0.1123 | 0.1342 | -0.0976 | 0.1594 | 0.0431 | -0.1233 | 0.186 | 0.1548 | 0.3877 |
| Q66C_1 | -0.0185 | 0.6457 | -0.0468 | -0.0426 | 0.0495 | -0.0878 | -0.1776 | 0.0466 | 0.0349 | -0.0447 | 0.0132 | 0.1303 | 0.2274 | 0.1483 | -0.1275 | 0.0883 | 0.0759 | -0.1206 | 0.0681 | 0.1659 | 0.428 |
| Q66D_1 | -0.0753 | 0.618 | -0.1127 | 0.0547 | 0.0183 | 0.0556 | -0.1361 | 0.155 | 0.1016 | -0.029 | -0.0364 | 0.0575 | 0.1411 | 0.1987 | -0.0082 | -0.0032 | 0.0792 | -0.0657 | 0.0048 | 0.0783 | 0.502 |
| Q66E_1 | -0.1704 | 0.463 | -0.1562 | -0.0926 | -0.0281 | -0.0133 | 0.1574 | 0.0925 | 0.0334 | -0.1613 | 0.0052 | 0.1726 | 0.0126 | 0.0183 | -0.0441 | 0.171 | 0.0742 | 0.1357 | -0.0019 | 0.0481 | 0.5961 |
| Q67A_1 | 0.1162 | 0.0441 | 0.2022 | 0.1497 | 0.1327 | -0.167 | -0.005 | -0.0537 | 0.0201 | -0.166 | -0.0981 | -0.0973 | 0.2003 | -0.2796 | 0.01 | 0.1194 | -0.0948 | -0.0584 | 0.0421 | -0.063 | 0.6393 |
| Q67B_1 | 0.2003 | 0.1728 | 0.0579 | 0.1303 | 0.0058 | -0.1503 | 0.0662 | -0.199 | 0.1385 | 0.0046 | 0.023 | 0.0401 | 0.4994 | 0.0518 | -0.0356 | 0.0286 | -0.0729 | -0.0485 | -0.0098 | -0.0089 | 0.5283 |
| Q67C_1 | 0.1179 | 0.2763 | 0.1605 | -0.0248 | 0.098 | -0.0099 | -0.2413 | -0.1333 | 0.0033 | 0.0121 | -0.0245 | -0.123 | 0.2118 | -0.0595 | -0.0694 | 0.1385 | 0.0619 | -0.1779 | 0.1227 | -0.0613 | 0.5778 |
| Q67D_1 | -0.2971 | 0.2429 | -0.1061 | -0.0368 | 0.0596 | 0.0033 | 0.0926 | 0.1027 | -0.1458 | 0.0101 | -0.1655 | 0.2668 | 0.0445 | 0.0916 | -0.2648 | -0.0778 | -0.051 | 0.0241 | -0.1114 | 0.1762 | 0.5211 |
| Q67E_1 | -0.103 | 0.3692 | 0.0629 | 0.0409 | 0.1543 | 0.1206 | -0.1045 | -0.0791 | -0.0407 | 0.0382 | 0.1366 | 0.1028 | 0.1417 | -0.0906 | -0.0877 | -0.1005 | -0.003 | 0.0115 | 0.0673 | 0.0179 | 0.6217 |
| Q68A_1 | 0.1141 | -0.1122 | 0.5797 | 0.2299 | -0.0418 | -0.0266 | 0.1163 | -0.0107 | -0.0334 | 0.008 | -0.0865 | -0.1673 | 0.2055 | 0.0841 | -0.052 | 0.1218 | -0.075 | -0.1418 | 0.0523 | -0.0802 | 0.3812 |

| TANZANIA | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q68B_1 | 0.0182 | -0.0603 | 0.7689 | 0.0379 | -0.1183 | -0.0577 | 0.0306 | -0.1895 | -0.1031 | 0.0128 | -0.2011 | -0.0043 | 0.1086 | 0.0774 | -0.1164 | 0.0586 | 0.013 | -0.0637 | -0.0187 | -0.1041 | 0.3197 |
| Q68C_1 | -0.0969 | -0.0263 | 0.8337 | 0.1058 | 0.0712 | -0.0204 | 0.0642 | -0.057 | -0.0005 | -0.1047 | -0.0618 | 0.0095 | 0.0804 | -0.0482 | -0.0719 | -0.053 | -0.0616 | -0.0021 | -0.1679 | 0.0069 | 0.2711 |
| Q68D_1 | 0.0293 | -0.1515 | 0.6447 | 0.1606 | 0.0229 | 0.0646 | 0.0424 | -0.0791 | -0.0476 | 0.0059 | 0.0449 | -0.0946 | -0.0946 | 0.088 | 0.0128 | -0.1704 | -0.0359 | 0.0884 | -0.0313 | 0.1245 | 0.4426 |
| Q68E_1 | -0.0481 | -0.1064 | 0.7186 | -0.0132 | -0.0201 | 0.0198 | -0.0957 | -0.1447 | -0.0873 | 0 | -0.1224 | 0.0386 | 0.0872 | -0.0278 | -0.0658 | -0.0518 | 0.0549 | 0.0879 | -0.0588 | -0.0216 | 0.4029 |
| Q68F_1 | -0.1563 | -0.027 | 0.8031 | 0.0409 | 0.0574 | 0.091 | -0.0889 | -0.1377 | 0.0028 | -0.114 | 0.0271 | 0.001 | -0.0177 | -0.0204 | -0.1573 | -0.0209 | 0.0632 | 0.0484 | -0.0081 | 0.0122 | 0.2673 |
| Q69A_1 | 0.0679 | -0.0524 | 0.5343 | 0.1089 | 0.0862 | 0.2104 | -0.0167 | 0.009 | -0.0352 | 0.0996 | 0.0584 | -0.3225 | -0.0178 | 0.1045 | 0.0981 | -0.0004 | -0.217 | -0.118 | 0.1451 | -0.0949 | 0.2751 |
| Q69B_1 | -0.2023 | -0.1491 | 0.2692 | -0.1824 | -0.0645 | -0.0426 | 0.1711 | 0.1908 | -0.0347 | -0.0066 | -0.0617 | -0.1223 | -0.1287 | 0.0354 | 0.0822 | 0.1342 | -0.0251 | 0.0926 | 0.2347 | -0.1244 | 0.5439 |
| Q69C_1 | -0.0406 | -0.0314 | 0.5775 | -0.1086 | 0.045 | -0.0378 | 0.0479 | -0.059 | -0.0744 | 0.1448 | -0.1003 | 0.1181 | 0.0147 | 0.3235 | -0.0413 | -0.016 | 0.0379 | 0.1043 | -0.007 | 0.4737 | |
| Q69D_1 | 0.0865 | -0.0193 | 0.6317 | 0.1057 | -0.0025 | 0.0062 | 0.1073 | 0.016 | 0.1183 | -0.0683 | 0.1575 | 0.0098 | -0.0783 | 0.0467 | 0.2581 | -0.0993 | 0.0978 | 0.1305 | 0.0803 | 0.0973 | 0.3298 |
| Q69E_1 | -0.2356 | -0.1959 | 0.2722 | -0.1979 | -0.0405 | 0.0076 | 0.1474 | 0.2509 | 0.0991 | 0.0609 | -0.0821 | 0.1216 | -0.1501 | 0.0383 | 0.4729 | -0.0117 | 0.095 | 0.2184 | 0.0535 | -0.2177 | 0.3783 |
| Q69F_1 | 0.0236 | 0.0908 | 0.5681 | -0.0535 | -0.1241 | 0.0421 | 0.0765 | -0.0669 | 0.1734 | -0.1985 | 0.0942 | -0.0586 | 0.012 | 0.0354 | 0.242 | -0.1292 | 0.1339 | 0.1086 | 0.0773 | -0.0119 | 0.4346 |
| Q6A_1 | 0.1811 | 0.1733 | 0.0279 | 0.0962 | -0.0095 | 0.1529 | -0.0599 | -0.0051 | 0.5056 | 0.0757 | 0.0347 | 0.0335 | 0.0903 | -0.0273 | -0.1075 | -0.0235 | -0.0402 | 0.0269 | 0.0561 | 0.0115 | 0.5088 |
| Q6B_1 | 0.2057 | 0.2499 | 0.0589 | 0.0531 | -0.0519 | 0.1255 | -0.1224 | 0.0187 | 0.5054 | 0.0891 | -0.0377 | 0.0116 | 0.1097 | -0.0613 | -0.0454 | -0.1281 | 0.1192 | -0.018 | -0.0085 | 0.1096 | 0.4031 |
| Q7_1 | 0.5128 | 0.0153 | -0.0579 | 0.1194 | 0.1356 | 0.0161 | 0.0789 | 0.011 | 0.4379 | -0.2114 | -0.1515 | -0.0818 | -0.0507 | -0.0691 | -0.03 | 0.0465 | 0.0081 | -0.0604 | 0.0477 | -0.0898 | 0.3426 |
| Q70A_1 | 0.1395 | 0.3147 | -0.041 | 0.273 | -0.1364 | 0.0224 | -0.0609 | -0.1591 | -0.0499 | -0.0929 | 0.1217 | 0.1985 | -0.0071 | 0.061 | -0.0188 | 0.0671 | -0.0479 | 0.0599 | -0.0152 | 0.0755 | 0.6623 |
| Q70B_1 | 0.22 | 0.2681 | -0.0575 | 0.258 | -0.132 | -0.0661 | 0.0889 | -0.0206 | 0.0289 | -0.1242 | 0.1413 | 0.1447 | -0.0079 | -0.0634 | 0.1289 | -0.0255 | 0.1515 | 0.0882 | 0.0896 | 0.1412 | 0.655 |
| Q71A_1 | -0.19 | 0.0858 | -0.1109 | 0.053 | 0.0521 | 0.2373 | 0.0872 | -0.0957 | 0.0538 | 0.2227 | -0.0739 | 0.0891 | -0.0803 | -0.0007 | -0.0851 | 0.5246 | 0.123 | -0.0608 | 0.029 | 0.0051 | 0.5031 |
| Q71B_1 | -0.1213 | 0.1917 | -0.1905 | -0.0812 | 0.135 | 0.0468 | 0.1819 | -0.1097 | 0.0787 | 0.0189 | 0.0145 | 0.0551 | -0.074 | -0.0212 | -0.096 | 0.546 | -0.0097 | 0.1104 | 0.0685 | -0.2024 | 0.5452 |
| Q71C_1 | -0.182 | 0.2966 | -0.0813 | -0.0369 | -0.0035 | -0.0863 | 0.1377 | -0.0946 | -0.0537 | 0.0669 | 0.0039 | 0.2184 | 0.1068 | 0.03 | -0.0873 | 0.5608 | -0.1254 | -0.0021 | 0.0392 | -0.0866 | 0.523 |
| Q72A_1 | -0.1905 | 0.0004 | -0.0721 | 0.1551 | 0.0636 | -0.0884 | 0.6765 | 0.0606 | -0.0587 | -0.0982 | -0.0932 | 0.1459 | -0.0741 | 0.125 | -0.0397 | 0.0597 | 0.0756 | 0.0504 | -0.0207 | -0.1749 | 0.4909 |
| Q72B_1 | -0.1592 | -0.0461 | 0.0785 | 0.1892 | 0.068 | -0.0735 | 0.7915 | -0.0577 | -0.0569 | -0.0252 | -0.1598 | 0.1969 | 0.0004 | 0.1431 | 0.0943 | 0.0758 | -0.0089 | 0.1538 | 0.0425 | -0.0567 | 0.4368 |
| Q72C_1 | -0.136 | 0.0297 | -0.0179 | -0.0295 | 0.1557 | -0.0761 | 0.5622 | -0.005 | 0.0114 | -0.0103 | -0.0168 | 0.013 | 0.0376 | 0.0997 | 0.0147 | 0.1315 | -0.0802 | -0.1369 | -0.0077 | 0.0491 | 0.6003 |
| Q73A_1 | 0.1291 | 0.2911 | 0.226 | 0.116 | -0.0341 | 0.1294 | -0.0078 | -0.1655 | -0.0422 | -0.1095 | 0.0187 | 0.1928 | 0.1933 | -0.0371 | 0.0618 | -0.0121 | 0.0782 | 0.0195 | -0.1932 | -0.1976 | 0.5063 |
| Q73B_1 | -0.1002 | 0.0423 | -0.0522 | -0.0354 | 0.0684 | -0.0207 | 0.2275 | 0.1218 | 0.0085 | -0.0556 | 0.0125 | 0.5953 | -0.0445 | 0.1379 | 0.0317 | 0.1433 | 0.04 | 0.1369 | 0.0758 | 0.0004 | 0.5063 |
| Q73C_1 | -0.0354 | 0.2147 | 0.0529 | 0.094 | 0.1152 | -0.0396 | 0.1631 | 0.075 | 0.0302 | 0.0738 | -0.0348 | 0.5497 | -0.022 | 0.1527 | 0.035 | -0.0031 | 0.1151 | 0.0958 | 0.1163 | 0.1632 | 0.5278 |
| Q73D_1 | 0.0998 | 0.1016 | 0.1868 | 0.0333 | 0.2103 | 0.1672 | 0.0993 | -0.0143 | 0.0537 | -0.1011 | -0.0866 | 0.3492 | -0.0377 | 0.0208 | -0.0583 | -0.0136 | -0.025 | -0.0402 | 0.0736 | 0.0493 | 0.6863 |
| Q73E_1 | 0.0267 | 0.0611 | -0.119 | -0.0243 | -0.1241 | -0.2121 | 0.2387 | -0.1354 | -0.0792 | -0.0556 | -0.0959 | 0.5006 | -0.0056 | 0.017 | -0.1193 | 0.1481 | 0.0131 | -0.0514 | 0.0207 | -0.0352 | 0.541 |
| Q75A_1 | 0.1399 | 0.2687 | 0.1169 | 0.1681 | -0.0201 | -0.0012 | -0.0414 | 0.1142 | -0.1226 | -0.0255 | -0.0879 | 0.2841 | -0.0424 | -0.0564 | -0.0534 | 0.0401 | 0.2591 | 0.0009 | 0.0353 | 0.0756 | 0.667 |
| Q75B_1 | 0.4583 | 0.2179 | 0.0411 | 0.1693 | 0.0772 | -0.1632 | -0.0002 | -0.0773 | -0.1257 | 0.0182 | 0.0016 | -0.0295 | -0.0022 | -0.1159 | -0.0163 | -0.0519 | 0.1045 | 0.0618 | -0.0258 | -0.0262 | 0.5709 |
| Q75C_1 | 0.3311 | 0.2108 | -0.0298 | 0.094 | -0.1522 | -0.0625 | -0.0645 | 0.0467 | -0.0007 | 0.1768 | 0.1083 | 0.2401 | 0.0196 | -0.0799 | 0.0645 | 0.1444 | -0.0604 | 0.0011 | 0.1337 | 0.0217 | 0.6906 |
| Q76A_1 | -0.0865 | 0.0181 | 0.1299 | 0.0125 | 0.0096 | 0.008 | -0.2046 | -0.3478 | 0.0166 | -0.0749 | 0.0518 | -0.2007 | 0.3446 | -0.0833 | -0.1076 | -0.0861 | 0.0692 | 0.0689 | -0.3004 | -0.0191 | 0.426 |
| Q76B_1 | -0.3703 | -0.1264 | -0.2091 | 0.2081 | -0.1285 | -0.1205 | -0.0653 | -0.2153 | -0.0101 | -0.022 | 0.0932 | -0.0189 | 0.0773 | -0.1678 | -0.1662 | 0.0087 | 0.0449 | 0.0877 | -0.2739 | 0.0082 | 0.5379 |
| Q78_1 | 0.2343 | 0.0711 | 0.1951 | -0.0098 | 0.1074 | -0.0141 | 0.0515 | -0.0801 | 0.2612 | 0.1593 | 0.1165 | -0.1326 | -0.0742 | 0.2303 | -0.0805 | -0.1432 | -0.1612 | -0.0998 | -0.0857 | 0.0389 | 0.5179 |
| Q85A_1 | 0.1748 | 0.0306 | 0.0156 | 0.1617 | 0.1195 | 0.1775 | -0.1314 | 0.0767 | -0.0902 | -0.4468 | 0.0352 | -0.0658 | -0.1016 | 0.0943 | 0.0035 | -0.3194 | 0.019 | -0.1145 | 0.0368 | -0.059 | 0.4833 |
| Q85B_1 | -0.1539 | 0.0128 | 0.3644 | -0.0471 | -0.0079 | 0.0446 | -0.2328 | 0.052 | 0.2331 | 0.1254 | -0.1758 | -0.1719 | -0.0885 | -0.0743 | -0.0689 | -0.0847 | 0.21 | -0.0552 | -0.1606 | -0.153 | 0.4385 |
| Q85C_1 | -0.3172 | -0.1652 | 0.0764 | -0.0951 | -0.0495 | -0.0548 | 0.0457 | 0.2271 | 0.1091 | 0.1792 | 0.0052 | -0.1644 | 0.0143 | -0.0576 | -0.0069 | 0.163 | -0.1388 | -0.2177 | -0.0662 | -0.1945 | 0.5363 |
| Q87_1 | 0.2717 | -0.1311 | -0.1547 | 0.0091 | -0.116 | -0.0711 | -0.1063 | 0.0189 | -0.1298 | -0.0015 | -0.0066 | -0.1452 | 0.4715 | 0.0575 | -0.0283 | -0.0359 | -0.0863 | -0.0096 | -0.0924 | 0.1466 | 0.6125 |
| Q88B_1 | -0.0083 | 0.0176 | -0.024 | 0.0913 | -0.124 | 0.1332 | 0.1801 | -0.1996 | 0.078 | 0.0184 | -0.0423 | -0.0899 | 0.3245 | -0.146 | -0.0052 | -0.0158 | -0.0564 | 0.0425 | 0.0229 | -0.0375 | 0.6889 |
| Q89A_1 | 0.1275 | -0.1705 | -0.1157 | 0.2235 | -0.0747 | 0.1153 | 0.14 | 0.0938 | -0.0104 | -0.1207 | -0.0235 | -0.0064 | 0.0995 | -0.0573 | 0.1663 | -0.0663 | -0.0303 | 0.1096 | -0.1031 | 0.0302 | 0.8005 |
| Q8A_1 | -0.0797 | -0.0087 | 0.0016 | 0.1222 | -0.1302 | 0.0151 | -0.1599 | 0.0075 | -0.3322 | -0.0577 | 0.1124 | 0.0104 | -0.1199 | 0.0304 | 0.1414 | 0.4234 | -0.2154 | 0.1014 | -0.0155 | 0.0312 | 0.5314 |
| Q8B_1 | -0.2449 | -0.129 | -0.0888 | 0.2557 | -0.057 | 0.1914 | -0.0313 | 0.0761 | -0.0489 | 0.0593 | -0.0294 | -0.0629 | -0.6954 | -0.0419 | 0.0158 | 0.0096 | -0.141 | -0.047 | 0.0954 | 0.0598 | 0.4644 |
| Q8C_1 | 0.0132 | -0.2597 | 0.1422 | 0.1806 | -0.1683 | 0.162 | 0.2379 | 0.0771 | -0.036 | 0.0277 | 0.0984 | 0.129 | -0.181 | 0.0114 | -0.1069 | 0.1569 | -0.4592 | -0.0381 | 0.1076 | -0.0355 | 0.4523 |
| Q8D_1 | 0.0235 | -0.1255 | 0.0668 | 0.1015 | -0.0122 | 0.0283 | 0.0095 | -0.2647 | -0.06 | -0.189 | 0.01 | 0.0388 | -0.3975 | 0.0291 | 0.1947 | 0.1507 | -0.204 | 0.1171 | 0.1262 | 0.0797 | 0.5851 |
| Q8E_1 | 0.1821 | -0.0727 | 0.0526 | 0.0235 | -0.2093 | -0.0178 | -0.0391 | 0.0124 | -0.2461 | 0.2094 | 0.1139 | -0.1943 | -0.0686 | -0.0341 | -0.1735 | 0.1501 | -0.5633 | 0.1093 | -0.0147 | -0.2018 | 0.448 |
| Q90A_1 | -0.025 | -0.0078 | -0.1268 | 0.0018 | 0.1371 | -0.1946 | 0.0641 | 0.0447 | 0.0243 | 0.0617 | 0.002 | 0.1428 | 0.0148 | -0.0168 | -0.0401 | -0.0006 | -0.1657 | -0.0644 | -0.1083 | -0.0638 | 0.8119 |
| Q90B_1 | -0.1406 | 0.0026 | 0.0351 | 0.1824 | 0.3345 | -0.1042 | 0.1187 | -0.1644 | 0.0823 | 0.1551 | -0.0542 | 0.1581 | 0.107 | 0.0705 | 0.0808 | -0.0261 | 0.0464 | -0.0123 | 0.1861 | -0.3145 | 0.44 |
| Q90C_1 | 0.2227 | 0.0053 | -0.0028 | -0.0154 | 0.3631 | -0.0771 | -0.0645 | 0.0673 | 0.0087 | 0.1216 | 0.0799 | -0.0036 | -0.1515 | -0.0392 | -0.0183 | -0.0383 | 0.0698 | -0.0708 | 0.0761 | -0.0938 | 0.7122 |
| Q91A_1 | 0.1128 | 0.0299 | -0.0491 | -0.017 | 0.8095 | -0.0226 | 0.0509 | -0.0792 | 0.0632 | -0.2302 | 0.161 | 0.0003 | 0.0279 | 0.027 | 0.0083 | 0.136 | -0.006 | -0.0728 | -0.051 | -0.0587 | 0.2835 |
| Q91B_1 | 0.1429 | 0.0715 | -0.0307 | -0.0731 | 0.8214 | 0.0555 | 0.0565 | -0.1125 | 0.0321 | -0.3656 | 0.131 | -0.0386 | -0.0164 | -0.0139 | 0.0103 | 0.0782 | -0.0123 | -0.0608 | -0.1314 | -0.1024 | 0.2448 |

| TANZANIA | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Q92_1 | -0.2402 | 0.0506 | 0.2016 | -0.1013 | 0.137 | -0.0129 | 0.1532 | -0.0344 | -0.08 | -0.3935 | 0.0423 | -0.1601 | 0.138 | -0.1776 | 0.0061 | 0.0881 | 0.0709 | -0.0667 | 0.0106 | -0.1247 | 0.6798 |
| Q94_1 | -0.0908 | -0.0085 | 0.0907 | 0.0603 | 0.3414 | -0.167 | 0.0911 | -0.0238 | 0.0118 | -0.0091 | -0.0228 | 0.0202 | 0.2034 | -0.0275 | 0.0319 | -0.0932 | 0.067 | -0.0935 | 0.0353 | -0.0877 | 0.7264 |
| Q95A_1 | -0.0093 | 0.0666 | -0.2066 | 0.0364 | -0.3813 | 0.0617 | -0.1698 | 0.1071 | -0.0484 | -0.0861 | -0.1371 | -0.0788 | -0.0475 | -0.1109 | 0.0948 | -0.0202 | 0.1283 | 0.0149 | -0.0738 | 0.4773 | 0.5017 |
| Q95B_1 | 0.0721 | 0.1474 | -0.019 | 0.3803 | -0.1549 | 0.0341 | -0.0799 | 0.0905 | -0.0352 | -0.0048 | -0.0224 | 0.1263 | -0.0234 | -0.0857 | -0.0396 | -0.1208 | 0.139 | 0.0153 | -0.0301 | 0.7346 | 0.3743 |
| Q96_1 | 0.1405 | 0.0213 | 0.2972 | -0.1136 | -0.0382 | -0.188 | 0.0009 | 0.0263 | 0.3261 | 0.0519 | -0.054 | 0.1658 | -0.005 | -0.1281 | -0.3686 | -0.0651 | -0.1213 | 0.043 | 0.067 | -0.1896 | 0.5311 |
| Q97_1 | -0.276 | 0.0006 | 0.2222 | -0.0558 | 0.5133 | -0.2919 | 0.1034 | 0.0554 | -0.0282 | 0.0021 | 0.0862 | -0.0308 | 0.0024 | -0.031 | 0.1172 | -0.062 | 0.0881 | -0.0253 | -0.1391 | -0.1219 | 0.5322 |
| Q98B_1 | -0.2286 | 0.0025 | -0.0098 | -0.009 | -0.4377 | -0.1213 | 0.0645 | -0.0221 | 0.0239 | 0.4762 | 0.0124 | -0.0451 | 0.0872 | 0.2005 | 0.119 | 0.0431 | 0.0067 | -0.0033 | 0.0709 | 0.0473 | 0.4598 |
| Q9A_1 | 0.1608 | -0.0102 | 0.1604 | -0.1355 | 0.0105 | 0.0273 | 0.1169 | -0.1744 | -0.0123 | -0.1543 | -0.0476 | 0.1202 | 0.0439 | 0.6267 | 0.0434 | 0.0689 | 0.0081 | -0.1109 | 0.1299 | -0.0281 | 0.5604 |
| Q9B_1 | -0.011 | -0.0773 | 0.0076 | -0.0493 | -0.0227 | -0.0176 | 0.1737 | -0.1246 | -0.1259 | -0.0391 | -0.0649 | 0.109 | -0.0396 | 0.6646 | 0.0095 | -0.0712 | -0.0346 | 0.0055 | 0.1705 | -0.1479 | 0.5194 |

| UGANDA | Factor1 | Factor 2 | Factor3 | Factor 4 | Factor5 | Factor 6 | Factor7 | Factor 8 | Factor9 | Factor 10 | Factor 11 | Factor 12 | Factor13 | Factor14 | Factor 15 | Factor 16 | Factor17 | Factor18 | Factor 19 | Factor 20 | Uniqueness |
|------------|---------|----------|---------|----------|---------|----------|---------|----------|---------|-----------|-----------|-----------|----------|----------|-----------|-----------|----------|----------|-----------|-----------|------------|
| EA_FAC_B_1 | 0.0467 | 0.0091 | 0.1045 | -0.1132 | -0.04 | 0.1321 | 0.0578 | 0.0263 | 0.4878 | 0.0217 | 0.2264 | -0.1413 | 0.1599 | 0.0224 | 0.0303 | 0.2123 | -0.0615 | -0.1198 | 0.0128 | 0.1607 | 0.6009 |
| EA_FAC_C_1 | 0.0984 | -0.0648 | -0.0908 | -0.0062 | 0.0286 | 0.1162 | 0.3201 | 0.0364 | 0.225 | -0.0955 | -0.2094 | 0.1888 | -0.093 | -0.1264 | 0.04 | 0.0638 | 0.1237 | -0.1992 | -0.0412 | -0.2064 | 0.5307 |
| EA_FAC_D_1 | -0.0695 | -0.0066 | 0.0935 | -0.1586 | -0.078 | 0.0958 | -0.0751 | 0.1032 | 0.6742 | -0.0915 | 0.0581 | -0.042 | 0.0263 | -0.0285 | -0.0168 | 0.0341 | 0.0266 | -0.0528 | 0.0961 | 0.0404 | 0.4857 |
| EA_FAC_E_1 | 0.0893 | 0.0669 | 0.0445 | -0.2758 | -0.0999 | 0.0468 | 0.0784 | -0.0363 | 0.786 | -0.1156 | -0.0082 | -0.0803 | -0.0606 | 0.0647 | -0.2287 | 0.0199 | -0.1435 | 0.1585 | 0.0615 | -0.0148 | 0.362 |
| EA_ROAD_1 | -0.0303 | 0.2548 | -0.0957 | -0.0512 | -0.039 | 0.0994 | 0.0536 | 0.2155 | 0.1191 | -0.1252 | 0.0211 | 0.1351 | 0.0497 | -0.0817 | 0.0454 | -0.007 | 0.3067 | -0.0674 | 0.1666 | -0.1561 | 0.5896 |
| EA_SEC_A_1 | 0.0596 | -0.0494 | -0.0307 | -0.1834 | -0.0646 | 0.0364 | 0.3106 | 0.1767 | 0.2985 | -0.2261 | -0.0865 | -0.0865 | -0.17 | 0.0668 | 0.0278 | -0.2652 | -0.1053 | -0.1231 | 0.0011 | -0.1089 | 0.5073 |
| EA_SEC_B_1 | -0.0594 | 0.1262 | 0.0688 | -0.0387 | -0.1371 | 0.0393 | 0.4151 | 0.14 | 0.0106 | -0.2252 | -0.1066 | -0.0725 | -0.2382 | -0.0515 | -0.0007 | -0.198 | 0.1932 | 0.0652 | 0.1303 | -0.1214 | 0.4648 |
| EA_SEC_E_1 | -0.0721 | -0.1692 | 0.0966 | -0.1575 | -0.1003 | -0.1037 | 0.0559 | 0.0708 | 0.0576 | 0.0882 | -0.0021 | 0.0593 | 0.0949 | -0.0528 | 0.042 | -0.0514 | -0.0491 | -0.0737 | -0.2233 | 0.0111 | 0.8198 |
| EA_SVC_A_1 | 0.1195 | 0.1181 | -0.2362 | -0.1213 | 0.1568 | 0.3341 | 0.0227 | 0.0598 | 0.3198 | -0.0783 | 0.0582 | 0.0562 | -0.0647 | 0.0262 | -0.1373 | -0.1367 | -0.0519 | -0.1224 | -0.0034 | -0.0537 | 0.487 |
| EA_SVC_B_1 | 0.1826 | 0.2144 | -0.1117 | -0.0416 | 0.1702 | 0.4083 | 0.1071 | 0.043 | 0.0511 | -0.1113 | 0.2639 | -0.1124 | -0.0801 | 0.0788 | -0.057 | -0.2103 | -0.0064 | 0.0233 | -0.1244 | 0.0404 | 0.5116 |
| EA_SVC_C_1 | 0.1442 | -0.0338 | -0.0836 | -0.0312 | 0.0071 | 0.4631 | -0.0134 | 0.1723 | -0.0002 | -0.173 | 0.0851 | 0.1565 | 0.1463 | -0.0027 | -0.0582 | -0.1347 | 0.1628 | -0.1654 | -0.0807 | -0.0286 | 0.471 |
| EA_SVC_D_1 | 0.1956 | 0.0198 | -0.0704 | -0.1658 | -0.0009 | 0.0668 | 0.0485 | -0.115 | 0.6431 | -0.2286 | -0.0674 | 0.0363 | 0.0979 | 0.1485 | 0.1248 | -0.0271 | 0.0339 | 0.0181 | 0.1153 | -0.034 | 0.342 |
| Q1_1 | 0.1272 | -0.3335 | 0.2037 | -0.0762 | -0.2612 | -0.0889 | -0.0677 | 0.0292 | 0.1386 | 0.1978 | 0.2022 | -0.1071 | 0.1137 | 0.0077 | 0.1568 | -0.2306 | -0.0148 | -0.1068 | -0.1146 | -0.0785 | 0.5751 |
| Q101_1 | -0.0859 | 0.0706 | -0.3133 | 0.1961 | 0.0077 | -0.0433 | 0.221 | -0.0956 | 0.097 | -0.0018 | -0.3864 | 0.1208 | -0.274 | 0.0405 | -0.0921 | 0.0536 | -0.037 | 0.0012 | 0.1977 | -0.007 | 0.5924 |
| Q104_1 | -0.0178 | -0.1517 | 0.1812 | -0.0308 | -0.0458 | -0.1124 | 0.2715 | -0.0298 | 0.2514 | -0.1723 | -0.0862 | -0.2255 | -0.0266 | 0.0045 | -0.2236 | 0.1617 | 0.0211 | -0.1121 | -0.0309 | -0.014 | 0.6497 |
| Q105_1 | 0.0197 | -0.0881 | 0.2525 | -0.1561 | -0.0194 | -0.0562 | 0.2864 | -0.1043 | -0.2513 | -0.037 | -0.062 | 0.1151 | -0.1189 | -0.1379 | -0.1063 | 0.2296 | -0.0333 | -0.1226 | -0.1698 | -0.1631 | 0.5235 |
| Q10A_1 | 0.0302 | -0.0126 | 0.1532 | 0.0239 | 0.3589 | 0.0991 | 0.0542 | 0.0621 | -0.1431 | 0.2584 | -0.1684 | 0.0392 | 0.051 | -0.1187 | -0.1589 | 0.0933 | 0.4369 | 0.0934 | 0.0231 | -0.2654 | 0.4782 |
| Q10B_1 | 0.1955 | -0.0527 | -0.0214 | -0.1108 | -0.1462 | -0.0272 | -0.1081 | -0.1295 | 0.0367 | -0.0797 | -0.016 | -0.0335 | -0.0767 | 0.2215 | -0.1313 | 0.1027 | 0.2446 | 0.199 | -0.1491 | -0.1436 | 0.5972 |
| Q10C_1 | -0.0286 | 0.0509 | 0.1217 | -0.0793 | 0.0067 | 0.2075 | 0.2714 | -0.2071 | 0.0776 | 0.0794 | 0.0227 | 0.0078 | 0.0672 | -0.0958 | -0.0141 | -0.161 | -0.0767 | 0.0048 | -0.179 | -0.1793 | 0.6691 |
| Q13A_1 | -0.1439 | 0.0669 | 0.115 | 0.0811 | 0.1834 | 0.1541 | -0.2646 | -0.04 | 0.0537 | -0.108 | -0.0631 | -0.214 | -0.0467 | 0.0606 | 0.0905 | 0.1874 | -0.1605 | 0.0947 | -0.1404 | -0.0524 | 0.6162 |
| Q13B_1 | 0.0043 | 0.0059 | -0.0885 | 0.0745 | 0.1196 | 0.6479 | 0.0945 | -0.0069 | 0.0306 | -0.1072 | -0.03 | -0.0877 | -0.0274 | 0.0423 | -0.014 | 0.0135 | 0.0896 | -0.0784 | -0.1427 | 0.0756 | 0.4598 |
| Q13C_1 | 0.0158 | 0.0159 | 0.1243 | 0.1214 | 0.0291 | 0.5287 | -0.1494 | 0.1573 | 0.0948 | -0.079 | -0.1603 | -0.1128 | -0.0156 | 0.0097 | 0.0803 | -0.0515 | -0.0586 | -0.0324 | -0.1099 | -0.1974 | 0.3988 |
| Q13D_1 | -0.1274 | -0.0298 | 0.1172 | 0.0093 | -0.0044 | 0.8337 | -0.0152 | -0.1204 | -0.0277 | -0.0204 | 0.0198 | 0.1476 | -0.0908 | 0.0712 | -0.1973 | 0.1679 | 0.1138 | -0.0006 | -0.0968 | 0.0377 | 0.3437 |
| Q14_1 | -0.1767 | 0.0023 | 0.1839 | 0.1918 | -0.1444 | 0.0474 | -0.0855 | 0.6222 | -0.1792 | -0.0352 | 0.1264 | -0.0366 | 0.108 | -0.1373 | 0.1501 | 0.0458 | -0.0452 | 0.0288 | -0.0619 | 0.0138 | 0.4187 |
| Q15_1 | -0.2058 | 0.0646 | 0.0346 | -0.0069 | -0.0026 | 0.004 | -0.1219 | 0.5537 | -0.0965 | -0.1259 | 0.1807 | 0.047 | -0.0141 | -0.0318 | 0.1855 | -0.0146 | 0.0918 | 0.1111 | 0.0539 | -0.0034 | 0.5682 |
| Q16_1 | 0.0092 | 0.0446 | -0.1692 | -0.0448 | -0.0343 | -0.0505 | -0.0597 | 0.3036 | -0.0402 | -0.0527 | 0.1382 | -0.1356 | 0.0777 | -0.0022 | -0.0354 | 0.2657 | -0.0695 | 0.1027 | 0.0133 | -0.19 | 0.7318 |
| Q17A_1 | -0.0322 | -0.0562 | 0.0466 | 0.4746 | -0.0219 | -0.0167 | -0.019 | 0.2969 | -0.035 | 0.1635 | 0.0017 | 0.0997 | 0.1745 | 0.1183 | -0.3279 | 0.0479 | -0.0999 | -0.1867 | 0.0137 | -0.1147 | 0.461 |
| Q17B_1 | -0.0432 | 0.0022 | 0.1954 | 0.1461 | 0.0757 | -0.0548 | 0.1304 | 0.3936 | -0.1 | 0.3363 | 0.0396 | -0.1332 | 0.0451 | -0.106 | 0.0037 | 0.1491 | -0.0157 | -0.0362 | 0.2636 | -0.067 | 0.5328 |
| Q17C_1 | 0.0544 | 0.094 | 0.2398 | 0.1544 | 0.1666 | -0.0019 | 0.1564 | 0.3642 | -0.0535 | 0.3353 | -0.1032 | -0.0898 | -0.0147 | 0.0421 | -0.1152 | 0.0822 | -0.2157 | -0.0336 | 0.1124 | -0.0702 | 0.4798 |
| Q18_1 | 0.0907 | 0.2817 | 0.2415 | -0.1063 | 0.087 | 0.1622 | 0.0945 | -0.031 | -0.1601 | 0.0138 | 0.0261 | 0.1955 | -0.09 | 0.2176 | 0.2086 | 0.0127 | -0.0365 | -0.1231 | -0.0818 | -0.1259 | 0.565 |
| Q19_1 | -0.2406 | 0.0351 | 0.3594 | -0.1463 | 0.166 | -0.0311 | -0.1461 | 0.1263 | -0.1021 | 0.0063 | 0.0384 | 0.1382 | -0.1086 | 0.0458 | 0.225 | -0.0066 | -0.0481 | -0.089 | 0.0082 | -0.219 | 0.6066 |
| Q20_1 | 0.1613 | 0.1201 | 0.0148 | 0.2024 | -0.0717 | -0.0325 | 0.056 | 0.1475 | -0.1234 | 0.0856 | 0.1508 | 0.0531 | -0.0167 | 0.0445 | -0.2011 | 0.2477 | -0.0733 | 0.2802 | -0.2896 | -0.0591 | 0.5372 |
| Q21_1 | -0.2181 | 0.067 | 0.238 | -0.1786 | 0.0655 | 0.0867 | 0.0179 | 0.074 | -0.1928 | 0.1352 | 0.278 | 0.0486 | 0.0297 | -0.0171 | 0.2765 | -0.1887 | 0.0554 | -0.071 | 0.0179 | -0.0657 | 0.5745 |
| Q22_1 | -0.0666 | 0.2871 | 0.1256 | -0.0778 | 0.0237 | 0.1175 | -0.0435 | 0.1724 | -0.0981 | 0.0348 | -0.4081 | -0.0241 | -0.0971 | -0.0206 | 0.0575 | 0.2399 | 0.0638 | -0.0076 | 0.0887 | 0.1317 | 0.5449 |
| Q23_1 | -0.0001 | -0.2731 | 0.0933 | -0.1749 | 0.0559 | -0.1963 | -0.1407 | -0.0109 | 0.0548 | -0.0862 | 0.0558 | 0.1889 | 0.2052 | 0.136 | 0.0088 | -0.1002 | 0.0068 | -0.0766 | -0.2742 | 0.0178 | 0.6281 |
| Q24_1 | -0.0989 | 0.4849 | 0.2381 | -0.146 | -0.0649 | 0.1891 | -0.0329 | -0.1037 | 0.0291 | -0.0151 | -0.2021 | 0.0646 | 0.0465 | -0.0222 | -0.1527 | 0.0939 | -0.1421 | -0.0111 | 0.0515 | -0.0462 | 0.536 |
| Q25A_1 | 0.0301 | -0.0027 | 0.6141 | -0.0133 | -0.043 | -0.0261 | 0.1636 | 0.0457 | 0.2162 | 0.0828 | 0.0423 | 0.0059 | -0.0345 | -0.0986 | -0.0216 | 0.0147 | 0.0996 | 0.1172 | 0.1652 | -0.009 | 0.5433 |
| Q25B_1 | 0.0802 | -0.1212 | 0.6941 | 0.1023 | 0.0383 | 0.0103 | 0.2001 | 0.1096 | -0.0244 | 0.1514 | 0.1328 | -0.1008 | -0.1461 | 0.0379 | -0.0306 | -0.0277 | 0.0054 | 0.0703 | 0.0082 | -0.0376 | 0.4179 |
| Q26A_1 | 0.1318 | 0.0573 | 0.7454 | -0.0608 | 0.1817 | 0.1 | -0.1511 | 0.03 | 0.029 | 0.0494 | 0.0661 | -0.0035 | 0.0764 | -0.0806 | -0.1629 | 0.0108 | 0.0503 | -0.0099 | 0.0236 | -0.1575 | 0.3891 |
| Q26B_1 | 0.0082 | 0.11 | 0.5824 | 0.0189 | 0.0552 | 0.0051 | -0.1778 | 0.1456 | -0.0043 | -0.055 | 0.0155 | 0.0038 | 0.0521 | -0.002 | 0.1114 | 0.1627 | 0.0313 | 0.0131 | -0.0577 | 0.0994 | 0.5234 |
| Q26C_1 | -0.0061 | -0.1597 | 0.1702 | 0.1479 | -0.0591 | -0.0301 | -0.0485 | -0.0509 | -0.0362 | -0.0209 | 0.5828 | 0.1418 | 0.2135 | 0.0032 | 0.0181 | 0.0422 | 0.0855 | 0.1119 | 0.0421 | -0.0104 | 0.5012 |
| Q26D_1 | 0.002 | -0.0164 | 0.0314 | -0.0622 | -0.1788 | 0.1289 | 0.0171 | 0.0823 | -0.0834 | 0.0443 | 0.5976 | -0.1599 | 0.1287 | 0.2011 | -0.1462 | 0.1001 | -0.0721 | 0.0594 | -0.107 | 0.0352 | 0.5084 |
| Q26E_1 | -0.0392 | -0.1826 | 0.0369 | -0.0286 | -0.0949 | -0.066 | -0.0504 | 0.138 | -0.003 | 0.0073 | 0.5803 | 0.066 | 0.104 | 0.26 | 0.0227 | 0.0334 | 0.0773 | 0.0793 | 0.1594 | 0.0743 | 0.4328 |
| Q27_1 | 0.0505 | -0.2166 | 0.0673 | -0.0775 | -0.1367 | -0.0715 | -0.2259 | -0.2779 | 0.0365 | -0.058 | -0.0846 | -0.2475 | 0.08 | 0.1338 | 0.0773 | -0.0389 | -0.3997 | 0.0345 | -0.2753 | -0.0338 | 0.408 |
| Q28_1 | 0.2919 | -0.1683 | 0.0185 | 0.4186 | 0.1255 | -0.0395 | 0.0006 | -0.041 | -0.0575 | 0.1801 | -0.2817 | -0.0159 | -0.0367 | 0.172 | -0.038 | 0.0829 | -0.1582 | -0.1428 | 0.0921 | -0.0605 | 0.4844 |
| Q29A_1 | -0.1698 | 0.1997 | 0.393 | 0.067 | 0.0369 | -0.0815 | 0.0258 | 0.1925 | -0.0684 | -0.0359 | -0.2422 | -0.0679 | -0.1269 | -0.0716 | 0.069 | 0.1167 | -0.022 | 0.0585 | -0.2268 | 0.1234 | 0.4158 |
| Q29B_1 | -0.0057 | -0.0083 | 0.4229 | -0.0924 | -0.0828 | -0.1373 | -0.0925 | 0.5518 | 0.0911 | -0.0465 | -0.1013 | 0.0539 | -0.011 | -0.0205 | -0.084 | 0.0178 | 0.018 | -0.0092 | 0.0912 | 0.1368 | 0.5327 |
| Q29C_1 | 0.1162 | -0.0348 | 0.3917 | -0.0507 | -0.1071 | -0.1332 | -0.0346 | 0.5945 | -0.1221 | -0.0805 | -0.0667 | 0.0934 | 0.1055 | -0.1106 | -0.003 | -0.1036 | 0.0739 | 0.1105 | -0.0204 | -0.0536 | 0.4418 |
| Q30A_1 | 0.0185 | -0.0221 | 0.3679 | 0.0628 | 0.0671 | -0.0264 | 0.0419 | 0.4266 | -0.0734 | 0.0847 | -0.0686 | 0.0707 | 0.0554 | 0.172 | 0.2664 | -0.0479 | 0.2563 | 0.1359 | 0.1682 | -0.1335 | 0.4341 |

| UGANDA | Factor1 | Factor 2 | Factor3 | Factor 4 | Factor5 | Factor 6 | Factor7 | Factor 8 | Factor9 | Factor 10 | Factor 11 | Factor 12 | Factor13 | Factor14 | Factor 15 | Factor 16 | Factor17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|--------|---------|----------|---------|----------|---------|----------|---------|----------|---------|-----------|-----------|-----------|----------|----------|-----------|-----------|----------|-----------|-----------|-----------|------------|
| Q30B_1 | 0.0228 | 0.0442 | 0.335 | 0.0719 | 0.0132 | 0.0854 | 0.0228 | 0.2491 | 0.1228 | 0.1282 | 0.0497 | 0.1629 | 0.0947 | 0.0721 | -0.028 | -0.0171 | 0.1173 | 0.1713 | 0.5479 | -0.2327 | 0.4362 |
| Q30C_1 | -0.0667 | -0.0936 | 0.3714 | 0.0443 | 0.0677 | 0.0007 | -0.0812 | 0.1245 | 0.1506 | 0.3356 | 0.0295 | -0.1176 | 0.1549 | 0.168 | 0.1472 | 0.1074 | 0.0012 | -0.0923 | -0.0559 | -0.2522 | 0.4834 |
| Q30D_1 | -0.1475 | -0.1928 | 0.5041 | 0.0081 | -0.0631 | -0.0782 | -0.0519 | 0.3221 | 0.1042 | -0.011 | 0.0407 | 0.0555 | 0.1477 | 0.2612 | -0.0549 | -0.0252 | -0.0641 | 0.0348 | 0.0826 | 0.0252 | 0.5615 |
| Q31A_1 | -0.0775 | 0.0383 | -0.2839 | 0.0284 | -0.0842 | -0.0749 | 0.0608 | -0.3276 | -0.0967 | -0.0349 | 0.2927 | 0.048 | -0.0885 | 0.1387 | 0.0644 | -0.014 | 0.0978 | -0.1557 | 0.1427 | -0.0093 | 0.6031 |
| Q31C_1 | 0.123 | -0.059 | -0.3384 | 0.018 | -0.0079 | 0.0678 | 0.1702 | -0.0077 | -0.0863 | 0.157 | 0.2531 | 0.1698 | -0.058 | -0.0439 | 0.0194 | 0.0651 | 0.31 | 0.0356 | -0.0293 | -0.0436 | 0.5732 |
| Q32_1 | 0.0257 | -0.1105 | -0.0565 | 0.0864 | 0.003 | -0.0687 | 0.0645 | 0.1522 | 0.1708 | -0.0113 | -0.0632 | -0.5416 | -0.0669 | -0.0629 | 0.0471 | -0.1218 | -0.203 | 0.0131 | -0.1922 | 0.0929 | 0.5865 |
| Q33_1 | -0.064 | 0.2028 | 0.0213 | -0.1905 | -0.0341 | 0.223 | 0.1652 | -0.0543 | -0.1958 | 0.1234 | 0.0702 | -0.2094 | 0.1767 | 0.0085 | 0.0449 | 0.0468 | 0.0314 | -0.2636 | -0.0897 | 0.1667 | 0.5638 |
| Q34_1 | -0.0919 | 0.0839 | -0.3489 | -0.1041 | 0.053 | 0.022 | 0.0553 | -0.0205 | 0.161 | 0.0158 | 0.0484 | 0.3165 | -0.0273 | 0.0625 | -0.1561 | 0.2183 | 0.1202 | 0.1388 | -0.0278 | -0.0265 | 0.6256 |
| Q35_1 | -0.0277 | 0.0227 | 0.3145 | -0.0643 | 0.1951 | 0.0216 | 0.0616 | 0.1741 | -0.0621 | -0.0306 | -0.0708 | 0.0264 | 0.1258 | -0.2099 | -0.0917 | -0.0239 | -0.007 | -0.0354 | -0.0925 | -0.0232 | 0.6714 |
| Q36_1 | 0.2649 | 0.005 | 0.0242 | 0.2304 | 0.0207 | -0.1562 | 0.0423 | 0.1093 | -0.1127 | -0.3107 | -0.1938 | 0.4248 | 0.0515 | 0.0105 | -0.0348 | 0.0483 | 0.1278 | 0.1464 | -0.2325 | 0.0519 | 0.4882 |
| Q37_1 | -0.0614 | 0.1201 | 0.1025 | 0.2803 | 0.1309 | -0.0141 | -0.0108 | -0.3298 | -0.1332 | 0.3515 | -0.0271 | 0.0802 | 0.0196 | -0.0407 | -0.1946 | 0.0374 | -0.1161 | 0.1906 | -0.1567 | -0.0379 | 0.4343 |
| Q38_1 | 0.0052 | -0.0943 | -0.048 | -0.0626 | 0.0888 | 0.0156 | -0.1426 | 0.0183 | -0.0431 | 0.0212 | 0.0224 | 0.6769 | -0.1569 | 0.1268 | -0.052 | 0.0077 | 0.193 | -0.0044 | 0.0016 | -0.0416 | 0.4846 |
| Q39_1 | -0.1917 | -0.1261 | -0.1291 | 0.3593 | 0.0954 | -0.025 | 0.0196 | -0.0501 | 0.0096 | -0.0899 | 0.039 | 0.3712 | 0.0185 | 0.0986 | -0.1554 | -0.0827 | 0.0648 | 0.0051 | 0.2761 | -0.1314 | 0.5396 |
| Q3A_1 | 0.1587 | 0.0761 | 0.1005 | 0.0718 | -0.0737 | 0.0111 | 0.019 | 0.0693 | -0.0714 | 0.4915 | 0.0177 | 0.0708 | -0.1443 | -0.1058 | -0.1393 | 0.0603 | 0.1418 | 0.1163 | 0.0201 | -0.0228 | 0.5589 |
| Q3B_1 | 0.027 | 0.1121 | 0.2288 | 0.0348 | 0.0997 | -0.1062 | -0.214 | 0.1019 | -0.2184 | 0.1825 | 0.0984 | -0.1072 | -0.1689 | -0.0079 | -0.1495 | -0.0921 | -0.0044 | 0.0502 | -0.0664 | 0.1769 | 0.5956 |
| Q4_1 | 0.5156 | -0.0524 | -0.0877 | 0.1874 | -0.1127 | 0.2722 | -0.2143 | -0.0669 | -0.0704 | 0.2742 | -0.0702 | 0.0213 | 0.2016 | 0.118 | -0.1656 | -0.1049 | 0.1957 | 0.0372 | -0.1225 | -0.0025 | 0.3931 |
| Q40_1 | -0.31 | 0.2233 | 0.2689 | 0.1254 | 0.0821 | 0.1532 | 0.0547 | 0.0308 | 0.1176 | 0.0533 | -0.0092 | -0.1133 | 0.1556 | 0.0219 | 0.1115 | 0.0317 | 0.089 | -0.0037 | -0.0439 | 0.117 | 0.4906 |
| Q41_1 | -0.0525 | -0.0223 | 0.0032 | 0.2282 | -0.1006 | 0.1154 | -0.0241 | -0.0298 | -0.0109 | -0.0266 | 0.162 | 0.1895 | -0.2031 | -0.0756 | -0.1857 | 0.1188 | 0.0408 | 0.2824 | 0.0569 | 0.0771 | 0.6603 |
| Q42_1 | 0.1914 | -0.1444 | -0.1569 | 0.429 | 0.0397 | 0.0205 | -0.0506 | -0.0202 | -0.1029 | 0.084 | -0.0183 | -0.0234 | -0.2363 | 0.0291 | 0.3868 | 0.084 | -0.1217 | 0.0669 | 0.0756 | -0.0907 | 0.4341 |
| Q43_1 | 0.2698 | -0.1926 | -0.005 | 0.433 | 0.1509 | -0.051 | 0.1711 | -0.1221 | -0.0039 | 0.2788 | -0.0312 | 0.2128 | -0.0252 | -0.055 | 0.1897 | -0.1177 | 0.0198 | -0.0284 | 0.2544 | -0.1131 | 0.3586 |
| Q46A_1 | 0.0742 | 0.1527 | 0.0063 | 0.3156 | -0.0025 | -0.0437 | -0.2226 | -0.0049 | 0.0247 | 0.0698 | -0.1476 | 0.0482 | -0.3479 | -0.0213 | 0.0822 | -0.067 | -0.0044 | 0.0055 | -0.0066 | 0.1255 | 0.5993 |
| Q46C_1 | 0.3308 | -0.1127 | 0.0552 | -0.1131 | 0.0836 | 0.0912 | 0.2287 | -0.0256 | 0.116 | 0.2135 | -0.1994 | -0.0002 | -0.0881 | 0.1553 | -0.0491 | 0.2331 | -0.0029 | -0.0161 | -0.3074 | -0.0835 | 0.5156 |
| Q46D_1 | -0.1169 | 0.29 | 0.1408 | -0.0087 | 0.0413 | 0.0428 | 0.1043 | 0.1047 | -0.2606 | 0.1098 | -0.0246 | -0.1473 | 0.0152 | -0.0172 | 0.0064 | -0.1911 | 0.0783 | 0.0477 | -0.2947 | -0.044 | 0.4985 |
| Q48A_1 | -0.053 | 0.4537 | 0.0954 | -0.0408 | 0.1849 | -0.1058 | 0.0351 | -0.0263 | -0.0629 | 0.0809 | 0.0485 | -0.213 | -0.1549 | 0.1592 | -0.1133 | 0.0502 | 0.0363 | -0.2182 | -0.0285 | 0.1465 | 0.4509 |
| Q48B_1 | -0.0557 | 0.4413 | -0.1452 | 0.1904 | 0.078 | -0.1892 | -0.009 | -0.0869 | -0.1182 | 0.0167 | -0.2186 | -0.1453 | -0.0872 | 0.0998 | -0.0478 | 0.0805 | -0.0121 | -0.1616 | -0.0885 | 0.0222 | 0.5478 |
| Q48C_1 | -0.1627 | 0.5508 | 0.1316 | -0.0433 | 0.023 | -0.1243 | -0.0569 | -0.011 | 0.0476 | 0.0163 | -0.0003 | -0.0539 | -0.2787 | 0.1417 | -0.1376 | -0.0666 | 0.0845 | -0.1395 | 0.1226 | -0.097 | 0.4661 |
| Q49_1 | 0.0483 | -0.3092 | 0.0693 | -0.1221 | -0.0519 | -0.0563 | 0.1013 | 0.2941 | -0.0926 | -0.0753 | 0.1744 | 0.1109 | -0.0766 | 0.1178 | -0.0419 | 0.2177 | -0.0679 | 0.0147 | -0.2603 | -0.0382 | 0.5896 |
| Q50_1 | -0.1094 | -0.0984 | 0.058 | -0.0165 | 0.0917 | -0.1044 | 0.0639 | 0.1516 | -0.2166 | -0.0636 | 0.105 | 0.3567 | 0.0398 | -0.0542 | 0.0606 | 0.1715 | 0.1161 | -0.162 | -0.1196 | 0.1983 | 0.6634 |
| Q51_1 | 0.0314 | 0.146 | 0.0084 | 0.0193 | 0.0994 | -0.1453 | 0.1837 | -0.0334 | -0.2335 | -0.0715 | -0.1037 | 0.1594 | 0.0125 | -0.0469 | -0.1232 | -0.1824 | -0.3298 | -0.1125 | -0.0824 | 0.0426 | 0.6394 |
| Q52B_1 | 0.0036 | 0.0021 | -0.2127 | -0.0387 | 0.2078 | -0.1174 | 0.1494 | 0.0622 | 0.157 | 0.1764 | -0.2245 | -0.021 | 0.1724 | 0.1723 | 0.1833 | 0.1772 | 0.0533 | -0.1288 | -0.0765 | 0.1901 | 0.5848 |
| Q52C_1 | -0.1543 | 0.04 | -0.1495 | -0.1833 | -0.0427 | -0.0214 | -0.2113 | 0.0677 | 0.1709 | 0.1475 | 0.091 | -0.0142 | 0.4969 | 0.0871 | 0.0069 | 0.0407 | 0.0459 | 0.0413 | -0.0602 | -0.0483 | 0.5256 |
| Q52D_1 | 0.066 | 0.0705 | -0.0298 | -0.2861 | 0.1549 | -0.0686 | 0.0781 | 0.1618 | -0.0406 | 0.2297 | 0.1359 | 0.0029 | 0.4825 | -0.0108 | 0.0744 | 0.0957 | 0.1124 | 0.1166 | 0.1475 | 0.0019 | 0.5246 |
| Q52E_1 | -0.0142 | -0.1834 | 0.0235 | -0.0698 | 0.0514 | -0.0039 | -0.0873 | 0.0646 | -0.017 | -0.0173 | 0.0983 | 0.0095 | 0.6876 | 0.1173 | -0.1395 | -0.0967 | -0.1466 | -0.0407 | 0.132 | 0.0419 | 0.4361 |
| Q53_1 | -0.4835 | -0.0861 | -0.1349 | 0.1875 | 0.0343 | 0.0399 | -0.1872 | -0.0667 | -0.145 | 0.2069 | -0.0657 | -0.0356 | 0.2187 | -0.2142 | 0.0382 | 0.0453 | 0.002 | -0.0679 | 0.0476 | -0.0557 | 0.4966 |
| Q54_1 | 0.1419 | -0.007 | -0.1352 | 0.1602 | -0.077 | 0.17 | 0.0937 | 0.3233 | -0.5526 | -0.1012 | 0.1251 | 0.0945 | -0.0947 | 0.1537 | -0.0902 | 0.0886 | -0.0871 | 0.0861 | 0.0312 | -0.1236 | 0.402 |
| Q56B_1 | -0.3657 | 0.0961 | 0.1111 | 0.0463 | -0.08 | -0.1065 | -0.153 | -0.0346 | 0.2848 | 0.0083 | 0.1032 | -0.0745 | 0.1006 | -0.1058 | -0.1704 | 0.0143 | -0.0503 | 0.3766 | -0.0858 | 0.2277 | 0.5182 |
| Q56C_1 | 0.0798 | -0.0358 | 0.0763 | -0.1502 | 0.1333 | -0.0375 | 0.033 | 0.0268 | 0.0165 | -0.1256 | -0.0762 | -0.0184 | -0.2065 | -0.1556 | -0.0985 | -0.0108 | -0.0616 | 0.5433 | -0.036 | 0.0386 | 0.6269 |
| Q56D_1 | -0.0839 | -0.03 | 0.0197 | -0.1935 | 0.1003 | -0.001 | 0.0589 | 0.0309 | 0.0583 | -0.0212 | 0.123 | 0.0795 | 0.0211 | -0.1189 | -0.233 | -0.0884 | 0.0542 | 0.7101 | 0.0155 | 0.0732 | 0.4526 |
| Q56E_1 | -0.0739 | -0.1008 | 0.0886 | -0.0868 | 0.1528 | 0.0251 | 0.1841 | -0.0027 | 0.0184 | -0.0106 | 0.0748 | -0.1468 | 0.078 | 0.0769 | -0.1912 | -0.1825 | -0.0176 | 0.6466 | 0.0631 | 0.0522 | 0.5023 |
| Q56F_1 | 0.1617 | 0.0682 | 0.2068 | -0.2154 | 0.0418 | -0.022 | 0.2948 | -0.005 | -0.0349 | -0.0376 | 0.0127 | -0.0557 | 0.3234 | 0.1189 | 0.076 | -0.2574 | -0.1333 | 0.2618 | -0.066 | 0.2228 | 0.4518 |
| Q56G_1 | 0.1623 | -0.1683 | 0.1221 | -0.1364 | 0.115 | 0.0452 | -0.1472 | -0.0032 | 0.0496 | -0.2455 | 0.1215 | 0.1786 | -0.0014 | 0.0309 | -0.1439 | 0.0303 | -0.0476 | 0.336 | 0.0587 | 0.0608 | 0.5963 |
| Q56H_1 | 0.1547 | -0.0835 | -0.196 | -0.0587 | 0.0614 | -0.1038 | -0.3403 | 0.1281 | -0.0097 | 0.0266 | 0.131 | 0.2962 | 0.0901 | -0.0101 | -0.2613 | -0.0307 | 0.0569 | 0.3846 | 0.0873 | -0.1442 | 0.3732 |
| Q56I_1 | 0.2107 | -0.0551 | -0.1766 | 0.0677 | 0.1183 | -0.0305 | -0.1803 | 0.0571 | -0.1396 | 0.0183 | -0.0101 | 0.0099 | 0.0034 | -0.0684 | -0.2131 | 0.2356 | 0.0461 | 0.4844 | 0.0041 | -0.1198 | 0.4659 |
| Q59A_1 | 0.1911 | 0.0189 | -0.115 | 0.6832 | -0.1079 | -0.043 | 0.0509 | -0.0326 | -0.2147 | 0.0912 | -0.0131 | -0.0889 | -0.092 | -0.0826 | 0.1805 | -0.056 | 0.0004 | 0.001 | -0.0222 | -0.0449 | 0.3185 |
| Q59B_1 | 0.0787 | 0.2513 | 0.0712 | 0.3899 | -0.1463 | -0.1192 | -0.045 | -0.1638 | 0.2134 | -0.0213 | 0.0642 | -0.0171 | 0.2173 | -0.0113 | -0.0402 | 0.0407 | 0.0225 | -0.097 | 0.0667 | -0.1607 | 0.5449 |
| Q59C_1 | -0.0245 | -0.0431 | 0.0626 | 0.679 | -0.1233 | -0.0364 | -0.0158 | 0.1039 | -0.2446 | -0.1187 | 0.1447 | 0.1257 | -0.1187 | -0.0143 | -0.001 | 0.1876 | 0.1621 | -0.1338 | 0.0031 | -0.0951 | 0.3598 |
| Q59D_1 | -0.0354 | 0.1831 | 0.1149 | 0.5429 | -0.1857 | -0.0355 | -0.0193 | 0.1088 | -0.0559 | -0.1456 | 0.0789 | 0.0768 | -0.0871 | 0.2011 | 0.0009 | -0.0123 | 0.1915 | -0.037 | 0.084 | -0.0767 | 0.4847 |
| Q59E_1 | -0.0522 | 0.039 | 0.006 | 0.5577 | 0.0175 | 0.0335 | 0.1433 | 0.0504 | -0.2134 | 0.0213 | 0.0132 | -0.1307 | 0.146 | 0.2098 | -0.0982 | 0.4092 | -0.0711 | -0.1956 | -0.1864 | -0.0688 | 0.4094 |
| Q59F_1 | 0.1164 | -0.182 | 0.0763 | 0.7287 | -0.0668 | 0.0188 | -0.0313 | 0.2097 | -0.3062 | 0.0114 | -0.1158 | -0.0758 | -0.02 | -0.0113 | 0.0573 | 0.0656 | 0.0299 | -0.1231 | 0.091 | -0.0883 | 0.3383 |

| UGANDA | Factor1 | Factor 2 | Factor3 | Factor 4 | Factor5 | Factor 6 | Factor7 | Factor 8 | Factor9 | Factor 10 | Factor 11 | Factor 12 | Factor13 | Factor14 | Factor 15 | Factor 16 | Factor17 | Factor18 | Factor 19 | Factor 20 | Uniqueness |
|--------|---------|----------|---------|----------|---------|----------|---------|----------|---------|-----------|-----------|-----------|----------|----------|-----------|-----------|----------|----------|-----------|-----------|------------|
| Q59G_1 | 0.0468 | -0.0402 | 0.1527 | 0.0353 | 0.0869 | -0.0189 | 0.3459 | -0.011 | 0.2233 | -0.0789 | 0.3233 | -0.1544 | 0.4874 | -0.0789 | -0.0331 | -0.0774 | 0.0589 | 0.0078 | 0.0352 | 0.0064 | 0.469 |
| Q59H_1 | -0.0196 | -0.0711 | -0.0226 | 0.6856 | 0.1261 | 0.0458 | -0.078 | -0.1489 | 0.0836 | -0.1986 | 0.0739 | -0.0067 | -0.0681 | 0.0598 | -0.0027 | 0.4916 | 0.1126 | -0.0603 | 0.0324 | 0.0671 | 0.3611 |
| Q59J_1 | -0.0112 | 0.006 | -0.0909 | 0.4017 | 0.0679 | -0.0193 | 0.0282 | 0.134 | -0.0632 | 0.1456 | 0.057 | -0.1195 | -0.1069 | -0.0459 | 0.0709 | 0.4877 | 0.2718 | -0.0029 | 0.0594 | 0.1918 | 0.4871 |
| Q5A_1 | 0.1057 | 0.0006 | 0.3194 | -0.1079 | -0.0313 | -0.0235 | -0.2734 | -0.0356 | -0.0676 | 0.2139 | 0.0039 | -0.0133 | -0.2745 | 0.2046 | 0.2291 | 0.115 | 0.1074 | -0.0407 | -0.1249 | 0.0305 | 0.5524 |
| Q5B_1 | 0.0078 | -0.0537 | 0.2258 | -0.0905 | 0.1836 | -0.0075 | -0.2657 | 0.0723 | -0.0081 | 0.3918 | 0.0664 | 0.0465 | -0.0914 | 0.0952 | 0.176 | 0.26 | 0.1643 | 0.0206 | -0.0368 | -0.0161 | 0.5694 |
| Q60A_1 | -0.5322 | -0.055 | -0.0262 | -0.062 | -0.0822 | 0.0474 | -0.0111 | -0.083 | -0.0014 | -0.1653 | -0.0032 | -0.0517 | 0.0745 | 0.0712 | -0.1015 | 0.0103 | -0.0835 | 0.0151 | -0.1165 | 0.2414 | 0.5651 |
| Q60B_1 | -0.2119 | -0.0676 | -0.1329 | -0.1071 | -0.0517 | 0.007 | -0.096 | 0.0711 | -0.1225 | -0.0049 | 0.012 | 0.0688 | 0.0278 | -0.0554 | -0.13 | 0.0374 | -0.0035 | 0.1215 | -0.0893 | 0.5348 | 0.5655 |
| Q60C_1 | -0.6463 | 0.1093 | -0.0747 | 0.0009 | -0.0284 | 0.1155 | -0.01 | -0.0167 | 0.0083 | 0.0507 | -0.0918 | 0.063 | 0.0938 | 0.0756 | 0.015 | 0.0058 | 0.0272 | 0.0193 | 0.126 | 0.3003 | 0.4938 |
| Q60D_1 | -0.2129 | -0.023 | -0.0282 | -0.1307 | -0.0484 | -0.1174 | -0.0268 | 0.0055 | 0.1003 | -0.0704 | 0.0052 | -0.2048 | -0.0004 | -0.026 | 0.1034 | -0.0931 | 0.0919 | 0.041 | -0.0266 | 0.552 | 0.5406 |
| Q60E_1 | -0.4205 | 0.1575 | 0.033 | -0.2753 | 0.2105 | -0.0343 | 0.0013 | 0.121 | -0.0316 | 0.053 | -0.0091 | 0.1229 | -0.2379 | 0.0021 | 0.1175 | -0.3354 | -0.133 | 0.0084 | -0.1055 | 0.1052 | 0.397 |
| Q60F_1 | -0.3005 | 0.0384 | 0.0643 | -0.0596 | 0.1763 | 0.047 | 0.0296 | -0.1746 | 0.111 | -0.0218 | 0.0659 | -0.1667 | -0.0163 | 0.0646 | 0.0059 | -0.054 | -0.006 | 0.0223 | -0.181 | 0.5728 | 0.4039 |
| Q60G_1 | -0.5017 | 0.1463 | -0.1948 | -0.0968 | 0.0035 | -0.0201 | -0.2825 | 0.0191 | -0.1521 | 0.0377 | -0.0229 | 0.2079 | 0.1524 | 0.2405 | -0.0478 | -0.145 | -0.0966 | 0.0396 | -0.0332 | 0.2528 | 0.4846 |
| Q61A_1 | -0.0307 | -0.0689 | 0.0172 | -0.0015 | 0.0707 | 0.1461 | -0.0141 | -0.0578 | 0.0306 | -0.1179 | 0.0571 | 0.0938 | -0.0242 | 0.7387 | 0.1563 | 0.0193 | 0.0137 | -0.1646 | -0.031 | -0.0044 | 0.4085 |
| Q61B_1 | 0.0175 | 0.0454 | 0.0791 | 0.0322 | 0.1417 | 0.1629 | -0.0658 | -0.1889 | 0.3032 | 0.0726 | 0.1879 | 0.0526 | -0.0433 | 0.7011 | -0.1405 | 0.1143 | 0.1199 | -0.0494 | -0.0637 | -0.0418 | 0.3462 |
| Q61C_1 | -0.2093 | -0.0013 | -0.0225 | 0.0694 | 0.2283 | 0.1326 | 0.2094 | -0.001 | -0.1193 | -0.0733 | 0.1688 | 0.0509 | 0.1327 | 0.8132 | -0.0122 | 0.0414 | -0.0439 | 0.043 | 0.0261 | 0.1373 | 0.26 |
| Q61D_1 | -0.0692 | 0.057 | -0.2263 | -0.0173 | -0.0229 | -0.0711 | -0.0705 | -0.158 | -0.0186 | 0.0628 | 0.0653 | 0.0502 | 0.1864 | 0.5472 | 0.166 | -0.0408 | -0.0624 | -0.0526 | -0.0492 | -0.1395 | 0.4738 |
| Q61E_1 | -0.0051 | 0.027 | -0.0931 | -0.0383 | -0.0517 | -0.0704 | -0.0263 | -0.2575 | 0.4072 | 0.0822 | 0.3692 | 0.0813 | 0.0249 | 0.439 | 0.0111 | 0.0396 | -0.0222 | -0.1219 | 0.1997 | 0.1195 | 0.398 |
| Q61F_1 | 0.1315 | 0.1915 | -0.0392 | 0.0676 | 0.0388 | -0.1685 | 0.0064 | 0.2283 | 0.0104 | -0.0156 | 0.0292 | 0.3796 | 0.173 | 0.3732 | 0.1058 | -0.1449 | 0.1195 | -0.1526 | -0.0609 | -0.033 | 0.4758 |
| Q62A_1 | 0.2101 | 0.0036 | 0.0872 | -0.076 | 0.0897 | -0.0927 | -0.0001 | -0.1979 | 0.2424 | -0.0614 | 0.3189 | 0.1403 | -0.2259 | -0.055 | 0.1363 | 0.2273 | 0.0372 | 0.0692 | -0.1352 | 0.0458 | 0.5489 |
| Q62B_1 | 0.0572 | 0.1029 | 0.1234 | 0.159 | 0.0215 | -0.0834 | 0.0507 | -0.0148 | 0.1533 | -0.0364 | 0.047 | 0.1675 | -0.1162 | 0.1348 | 0.2161 | 0.5098 | 0.1282 | -0.0737 | 0.0752 | -0.1163 | 0.5292 |
| Q65A_1 | 0.2127 | 0.0003 | -0.1067 | 0.1866 | -0.1977 | 0.0132 | -0.03 | -0.0357 | -0.1745 | 0.207 | 0.0444 | -0.0572 | -0.1585 | -0.0176 | -0.0029 | -0.1186 | -0.1572 | 0.1952 | -0.0109 | -0.0628 | 0.5782 |
| Q65B_1 | -0.0174 | 0.1508 | -0.0264 | -0.0605 | -0.1929 | -0.0439 | 0.0182 | 0.1049 | -0.0822 | 0.3223 | 0.1099 | 0.0886 | -0.2038 | 0.0023 | 0.0479 | 0.1831 | -0.2035 | 0.084 | 0.0088 | -0.2489 | 0.4942 |
| Q65C_1 | 0.2001 | 0.2443 | -0.0358 | -0.0926 | -0.1596 | -0.0991 | -0.1428 | -0.031 | -0.0362 | 0.2071 | 0.135 | -0.0997 | -0.2362 | 0.1543 | -0.152 | 0.0188 | -0.1236 | 0.113 | 0.1104 | 0.1464 | 0.4689 |
| Q65D_1 | 0.1671 | 0.0129 | -0.0844 | -0.0403 | -0.1544 | -0.0306 | -0.1277 | -0.058 | 0.1699 | 0.1194 | 0.3457 | 0.1115 | -0.103 | 0.2854 | -0.1452 | 0.0326 | -0.0747 | 0.0473 | -0.3336 | 0.0487 | 0.4735 |
| Q65E_1 | 0.2012 | 0.0771 | -0.0276 | 0.0329 | -0.2935 | -0.0523 | 0.0314 | 0.0111 | -0.1157 | 0.1762 | 0.2017 | 0.2496 | -0.0443 | 0.0444 | 0.0787 | 0.0146 | 0.1733 | -0.2917 | 0.1356 | 0.017 | 0.4712 |
| Q65F_1 | 0.0814 | 0.389 | -0.1195 | 0.0704 | -0.0215 | 0.0082 | 0.129 | 0.007 | 0.0269 | 0.2988 | -0.0361 | 0.106 | 0.1863 | 0.099 | 0.0737 | 0.2431 | -0.1169 | 0.021 | -0.0718 | 0.0673 | 0.5187 |
| Q65G_1 | 0.487 | 0.4465 | -0.045 | -0.0647 | -0.0158 | 0.025 | -0.1514 | 0.031 | -0.0202 | 0.2261 | 0.0382 | 0.0892 | 0.0428 | -0.1927 | 0.05 | 0.0602 | -0.0949 | 0.0017 | 0.1064 | -0.0913 | 0.3908 |
| Q65H_1 | 0.2766 | 0.4133 | 0.2125 | -0.0097 | -0.08 | 0.0577 | -0.0685 | -0.0434 | -0.0273 | 0.1505 | -0.0709 | 0.1114 | -0.0912 | -0.009 | -0.194 | -0.1804 | 0.018 | -0.0838 | -0.0554 | 0.1226 | 0.5645 |
| Q65I_1 | 0.3329 | 0.2105 | -0.0344 | 0.0386 | 0.0406 | 0.1521 | -0.2938 | -0.0206 | -0.1316 | -0.0535 | 0.0636 | -0.0656 | -0.0322 | -0.2079 | 0.2104 | -0.0654 | 0.0117 | -0.077 | -0.0302 | -0.021 | 0.6413 |
| Q65J_1 | 0.0096 | 0.0307 | 0.117 | 0.0939 | -0.098 | -0.0588 | -0.06 | 0.0286 | 0.0305 | 0.0004 | 0.2108 | 0.3004 | -0.0833 | 0.1276 | 0.0773 | 0.0352 | -0.0898 | 0.1943 | 0.0667 | -0.1421 | 0.6178 |
| Q65K_1 | 0.1711 | 0.2144 | -0.1399 | 0.0429 | -0.132 | -0.1892 | 0.0102 | -0.0818 | -0.0384 | 0.0443 | 0.0259 | 0.0098 | -0.0439 | 0.0866 | -0.0904 | 0.1258 | -0.2178 | -0.1136 | 0.2359 | -0.0483 | 0.6324 |
| Q65L_1 | 0.1123 | 0.5722 | 0.0211 | -0.0963 | -0.0647 | -0.1657 | 0.0828 | 0.0077 | 0.2536 | 0.1804 | -0.1072 | 0.0472 | -0.0728 | -0.0421 | 0.1847 | 0.0724 | 0.0899 | 0.0232 | -0.0427 | 0.0335 | 0.4524 |
| Q65M_1 | -0.0839 | 0.6421 | -0.0369 | 0.0776 | 0.0716 | 0.0795 | -0.0793 | 0.0688 | 0.008 | 0.1428 | 0.0008 | 0.1286 | 0.0185 | -0.0596 | 0.0755 | -0.0361 | 0.004 | 0.0426 | -0.0448 | 0.1019 | 0.4252 |
| Q65N_1 | 0.6031 | 0.2177 | -0.0135 | 0.1527 | -0.0427 | -0.0599 | -0.0395 | -0.0002 | 0.0542 | -0.0382 | 0.0116 | 0.0068 | 0.0024 | -0.1498 | 0.1679 | 0.0444 | -0.0244 | 0.009 | -0.345 | 0.0167 | 0.4234 |
| Q65O_1 | 0.4549 | 0.0724 | -0.1226 | 0.1342 | 0.0972 | 0.0396 | -0.0216 | 0.049 | 0.1548 | -0.045 | -0.0284 | 0.0137 | -0.2667 | -0.0178 | 0.1157 | -0.2221 | 0.0254 | -0.0292 | -0.1036 | 0.1278 | 0.5647 |
| Q65P_1 | 0.064 | 0.7517 | -0.3362 | -0.1088 | -0.1427 | 0.0755 | -0.0149 | -0.0533 | 0.0262 | 0.109 | -0.116 | -0.0124 | -0.1096 | -0.0161 | -0.0394 | -0.1158 | 0.0289 | -0.0356 | 0.1161 | -0.1487 | 0.3946 |
| Q66A_1 | 0.5736 | 0.1178 | 0.0989 | 0.1176 | -0.1156 | -0.0778 | 0.0548 | -0.1597 | 0.1544 | -0.0026 | -0.0961 | 0.1263 | 0.08 | -0.0461 | 0.1991 | 0.0115 | 0.1525 | -0.1146 | -0.1444 | -0.0664 | 0.4347 |
| Q66B_1 | 0.3517 | 0.1667 | 0.1981 | -0.0308 | 0.0869 | -0.1388 | -0.0598 | -0.1762 | 0.1296 | -0.0305 | 0.0681 | 0.0273 | 0.0026 | -0.0041 | 0.0739 | 0.0803 | -0.1425 | 0.063 | 0.1222 | -0.3219 | 0.5841 |
| Q66C_1 | 0.3673 | 0.3444 | 0.192 | 0.0428 | 0.0082 | -0.1882 | -0.0815 | -0.0832 | -0.0723 | 0.0122 | -0.0891 | -0.2009 | 0.0145 | -0.1999 | 0.1188 | 0.0164 | -0.1145 | 0.1052 | -0.0853 | -0.4094 | 0.3795 |
| Q66D_1 | 0.3786 | 0.3567 | 0.1617 | 0.1177 | -0.0258 | 0.0151 | 0.152 | -0.0428 | -0.0884 | -0.1768 | 0.1338 | -0.0594 | -0.0165 | 0.0368 | 0.0961 | 0.0779 | -0.0409 | 0.0353 | -0.0403 | -0.2064 | 0.5151 |
| Q66E_1 | 0.4997 | 0.2231 | 0.122 | 0.2367 | 0.1106 | 0.0247 | 0.3827 | 0.0494 | 0.0462 | -0.0483 | 0.1454 | -0.0307 | 0.1438 | -0.0135 | 0.0568 | 0.0308 | -0.0132 | -0.0165 | 0.1237 | 0.011 | 0.4426 |
| Q67A_1 | 0.1762 | -0.0955 | 0.1139 | 0.098 | -0.234 | 0.0985 | 0.0094 | 0.1671 | -0.1003 | -0.0652 | 0.2791 | -0.0766 | 0.0075 | -0.0266 | 0.1024 | 0.247 | 0.021 | -0.0374 | 0.0903 | 0.0632 | 0.6473 |
| Q67B_1 | 0.3749 | -0.1603 | 0.0405 | 0.0063 | -0.0845 | 0.2331 | 0.0722 | 0.0888 | 0.0671 | -0.2138 | 0.2719 | -0.0088 | -0.0458 | 0.1052 | 0.0884 | -0.0182 | 0.0748 | 0.2349 | 0.1041 | 0.1377 | 0.4541 |
| Q67C_1 | 0.2347 | 0.148 | 0.1335 | 0.0789 | 0.0745 | -0.0286 | -0.0293 | -0.141 | 0.0196 | -0.1322 | 0.1013 | 0.0875 | -0.0481 | -0.0549 | -0.049 | 0.1886 | -0.129 | -0.176 | 0.3472 | -0.1118 | 0.5986 |
| Q67D_1 | 0.1548 | 0.5257 | 0.1049 | -0.0057 | -0.1461 | 0.0424 | -0.0119 | 0.0573 | -0.2139 | 0.058 | 0.054 | -0.0756 | 0.0109 | 0.0103 | -0.1158 | 0.0127 | -0.1099 | -0.1034 | 0.0173 | -0.0386 | 0.5262 |
| Q67E_1 | 0.3396 | -0.1911 | 0.3584 | 0.1858 | 0.0047 | 0.1696 | -0.2675 | 0.0423 | -0.017 | -0.143 | -0.0786 | 0.1106 | -0.2133 | -0.0303 | 0.0662 | -0.0549 | 0.1681 | 0.121 | -0.0369 | 0.0072 | 0.5519 |
| Q68A_1 | 0.0227 | -0.1024 | -0.0276 | 0.1052 | 0.2278 | 0.0405 | 0.6835 | -0.0958 | 0.0239 | 0.03 | 0.0119 | -0.0296 | 0.0692 | 0.034 | 0.0309 | 0.0038 | -0.103 | 0.0186 | 0.0414 | 0.0687 | 0.5415 |
| Q68B_1 | -0.0581 | -0.0537 | -0.1361 | 0.0762 | 0.5362 | 0.1638 | 0.2881 | 0.0532 | -0.0221 | -0.0814 | -0.0722 | -0.2857 | -0.1551 | 0.1306 | 0.0179 | -0.0063 | 0.1597 | 0.211 | -0.0672 | 0.0694 | 0.3973 |
| Q68C_1 | -0.2481 | -0.0501 | 0.0674 | -0.038 | 0.7082 | 0.1169 | 0.1514 | -0.0848 | -0.0575 | -0.012 | -0.0782 | 0.0373 | -0.1209 | 0.1719 | -0.0445 | -0.1212 | -0.0361 | 0.0395 | -0.0134 | 0.0182 | 0.3116 |

| UGANDA | Factor1 | Factor 2 | Factor3 | Factor 4 | Factor5 | Factor 6 | Factor7 | Factor 8 | Factor9 | Factor 10 | Factor 11 | Factor 12 | Factor13 | Factor14 | Factor 15 | Factor 16 | Factor17 | Factor18 | Factor 19 | Factor 20 | Uniqueness |
|--------|---------|----------|---------|----------|---------|----------|---------|----------|---------|-----------|-----------|-----------|----------|----------|-----------|-----------|----------|----------|-----------|-----------|------------|
| Q68D_1 | -0.1003 | -0.0279 | 0.0878 | -0.0427 | 0.5079 | -0.0047 | 0.0739 | -0.1526 | -0.0971 | -0.0775 | 0.1626 | -0.072 | 0.0873 | 0.1061 | -0.0457 | -0.2488 | -0.2787 | 0.0933 | 0.2204 | -0.1128 | 0.506 |
| Q68E_1 | 0.1406 | -0.0864 | 0.1506 | -0.0006 | 0.7382 | 0.1485 | -0.0543 | -0.0569 | -0.0418 | 0.0401 | -0.0632 | 0.1292 | 0.1217 | 0.0117 | 0.0212 | 0.0726 | 0.1619 | 0.0356 | -0.0554 | 0.0293 | 0.4023 |
| Q68F_1 | 0.0368 | 0.0021 | 0.0207 | -0.0526 | 0.6103 | 0.0444 | 0.1251 | 0.0281 | 0.1727 | -0.0116 | -0.1733 | 0.0371 | 0.0297 | 0.0115 | 0.2382 | 0.1364 | 0.1436 | 0.0465 | 0.2279 | 0.001 | 0.4868 |
| Q69A_1 | 0.1173 | 0.0553 | -0.2397 | -0.0029 | 0.3858 | -0.0047 | 0.6059 | -0.0919 | -0.0691 | -0.114 | -0.0693 | -0.126 | -0.0516 | 0.0508 | 0.0299 | 0.1053 | 0.0833 | 0.0903 | -0.0067 | -0.0046 | 0.4287 |
| Q69B_1 | -0.2129 | 0.1635 | 0.0877 | -0.0406 | 0.529 | -0.1074 | 0.3479 | -0.0028 | -0.1112 | -0.0156 | -0.1048 | 0.011 | -0.1019 | 0.092 | 0.1219 | -0.0408 | -0.1254 | 0.0215 | -0.0505 | -0.0771 | 0.391 |
| Q69C_1 | 0.0436 | -0.0831 | 0.03 | -0.1336 | 0.694 | -0.0828 | 0.0767 | -0.0611 | -0.1086 | -0.1452 | 0.0351 | -0.0022 | 0.1375 | 0.0661 | 0.0188 | 0.0797 | -0.1181 | 0.0845 | 0.1148 | 0.0649 | 0.4078 |
| Q69D_1 | -0.1032 | -0.0851 | 0.1305 | -0.1111 | 0.4518 | -0.1333 | 0.046 | -0.2147 | 0.0738 | -0.0022 | -0.0927 | 0.1267 | 0.1919 | 0.0637 | -0.0846 | 0.0352 | 0.11 | 0.2171 | 0.2222 | -0.1499 | 0.4845 |
| Q69E_1 | -0.0552 | 0.0093 | 0.1455 | -0.1249 | 0.4774 | -0.0413 | 0.327 | 0.1015 | -0.0306 | 0.025 | 0.0347 | 0.203 | 0.0746 | 0.0999 | 0.0265 | -0.0974 | 0.0446 | -0.0033 | -0.058 | 0.3324 | 0.4232 |
| Q69F_1 | 0.0783 | -0.042 | -0.0897 | -0.3035 | 0.3392 | -0.0578 | 0.3718 | 0.0868 | 0.0503 | 0.0015 | -0.0367 | -0.1192 | 0.1942 | 0.0191 | -0.0845 | 0.0133 | 0.1421 | 0.1046 | 0.0412 | 0.1641 | 0.46 |
| Q6A_1 | 0.0872 | 0.1908 | 0.0032 | -0.0843 | -0.1381 | -0.0223 | -0.0321 | -0.0914 | -0.0906 | 0.7379 | 0.0536 | -0.0703 | 0.1507 | -0.081 | -0.0515 | -0.1125 | 0.0744 | -0.0897 | -0.0243 | -0.0656 | 0.4274 |
| Q6B_1 | -0.1729 | 0.1551 | 0.0891 | 0.0479 | -0.1017 | -0.0455 | -0.2301 | -0.0683 | -0.2034 | 0.6043 | -0.2198 | 0.0221 | -0.0325 | 0.0248 | -0.153 | -0.0252 | 0.0423 | -0.1025 | -0.0223 | 0.0849 | 0.4035 |
| Q7_1 | 0.2353 | 0.1787 | 0.2965 | 0.235 | -0.1625 | 0.0183 | -0.1325 | 0.0745 | 0.0532 | 0.31 | 0.0776 | 0.0056 | -0.1134 | 0.0518 | -0.1098 | 0.0416 | 0.2054 | -0.0893 | -0.128 | 0.2215 | 0.4258 |
| Q70A_1 | -0.1377 | -0.0087 | 0.2679 | 0.2847 | -0.2913 | 0.1928 | 0.2357 | -0.0641 | 0.0162 | 0.1031 | -0.0131 | 0.0148 | -0.2181 | -0.0619 | 0.0748 | 0.1807 | -0.1565 | 0.023 | -0.168 | 0.0845 | 0.4212 |
| Q70B_1 | -0.0594 | 0.1096 | 0.2417 | -0.004 | -0.2735 | 0.0565 | 0.0509 | 0.1672 | -0.0625 | 0.1233 | -0.0616 | 0.0672 | -0.1038 | 0.0272 | -0.0591 | -0.0384 | 0.328 | 0.1172 | 0.0546 | -0.02 | 0.6523 |
| Q71A_1 | 0.1003 | 0.0817 | 0.0942 | 0.5651 | -0.162 | -0.0583 | 0.1126 | 0.0114 | -0.0985 | 0.0891 | 0.0189 | 0.0073 | -0.0648 | -0.0917 | -0.026 | 0.0764 | 0.2043 | 0.1013 | -0.0145 | 0.063 | 0.4606 |
| Q71B_1 | 0.2277 | 0.0996 | 0.2578 | 0.0882 | -0.0173 | -0.02 | 0.1505 | 0.1187 | 0.2309 | 0.2271 | 0.1359 | -0.019 | 0.1089 | -0.0598 | -0.201 | 0.0279 | 0.0179 | 0.0113 | -0.0385 | -0.124 | 0.6434 |
| Q71C_1 | 0.3007 | 0.0972 | 0.2202 | 0.1857 | 0.0049 | -0.0115 | 0.3328 | -0.0664 | -0.1142 | 0.0286 | -0.0647 | -0.1958 | 0.1272 | 0.102 | 0.0388 | 0.009 | -0.0622 | -0.0659 | 0.0163 | -0.1829 | 0.6009 |
| Q72A_1 | 0.044 | -0.0305 | -0.0454 | 0.036 | -0.0353 | -0.0564 | 0.0054 | 0.0294 | -0.0068 | -0.1389 | 0.0389 | 0.0892 | -0.0529 | 0.0223 | 0.7038 | 0.0899 | 0.1506 | -0.1495 | 0.0054 | -0.1047 | 0.5002 |
| Q72B_1 | 0.0895 | -0.0087 | 0.0109 | 0.0709 | 0.0785 | -0.0977 | 0.0224 | 0.0917 | -0.0375 | -0.0277 | -0.0465 | -0.1565 | -0.05 | 0.0213 | 0.8839 | -0.0518 | 0.0923 | -0.2955 | -0.0065 | 0.0497 | 0.26 |
| Q72C_1 | 0.2082 | -0.0597 | -0.1197 | -0.0052 | -0.0995 | 0.0413 | 0.113 | 0.0767 | -0.1646 | -0.2191 | 0.0555 | 0.0276 | 0.0001 | 0.0102 | 0.5029 | 0.2214 | -0.0012 | -0.1305 | -0.1876 | -0.1153 | 0.5485 |
| Q73A_1 | -0.1583 | 0.328 | 0.1679 | 0.0077 | -0.1462 | 0.033 | 0.184 | 0.1735 | 0.2283 | 0.0506 | 0.0767 | 0.0084 | -0.132 | 0.1864 | 0.0437 | -0.0655 | 0.1114 | -0.0944 | 0.0598 | -0.0611 | 0.5297 |
| Q73B_1 | 0.1458 | 0.4644 | 0.0681 | -0.0891 | -0.0484 | 0.0489 | 0.2194 | 0.0841 | 0.1224 | -0.0247 | 0.0467 | -0.0095 | -0.006 | 0.0885 | -0.0117 | -0.2769 | 0.0159 | 0.1719 | -0.0813 | 0.0403 | 0.5417 |
| Q73C_1 | 0.1497 | 0.4242 | 0.1971 | 0.0479 | -0.0287 | -0.076 | 0.0251 | 0.1765 | 0.0796 | -0.2958 | -0.1453 | 0.079 | 0.0123 | 0.0965 | -0.0112 | -0.0856 | 0.1522 | 0.0359 | 0.0696 | -0.1496 | 0.52 |
| Q73D_1 | -0.0599 | 0.3412 | 0.0151 | -0.0705 | 0.0005 | 0.0437 | -0.1069 | 0.4052 | 0.2245 | 0.0251 | -0.1649 | -0.047 | -0.016 | -0.0627 | 0.096 | 0.0709 | 0.2404 | -0.02 | 0.1117 | 0.1158 | 0.5126 |
| Q73E_1 | 0.1145 | 0.3962 | 0.0064 | -0.1618 | 0.0102 | -0.1951 | 0.0297 | 0.3547 | 0.2592 | 0.0923 | -0.0428 | -0.1114 | -0.1377 | -0.1762 | 0.1037 | -0.0284 | -0.0047 | -0.0493 | -0.0253 | -0.0734 | 0.5205 |
| Q75A_1 | 0.1374 | -0.1782 | -0.1553 | 0.1151 | -0.0468 | -0.0949 | -0.0832 | 0.0911 | 0.1556 | -0.0856 | 0.3466 | 0.075 | 0.1054 | 0.2093 | -0.0399 | 0.1607 | -0.0886 | 0.0415 | 0.1729 | 0.0035 | 0.495 |
| Q75B_1 | 0.3255 | -0.0153 | -0.2433 | 0.1267 | -0.1538 | -0.101 | -0.0224 | -0.093 | 0.1115 | -0.1056 | 0.1454 | -0.1513 | 0.2337 | 0.0432 | 0.1741 | 0.1763 | -0.0126 | 0.0169 | -0.0069 | -0.0024 | 0.6058 |
| Q75C_1 | 0.0627 | 0.0561 | 0.0235 | 0.0257 | -0.1251 | -0.0426 | -0.1455 | 0.0067 | 0.304 | 0.0037 | 0.2511 | 0.2171 | 0.1052 | 0.0381 | -0.0515 | 0.2724 | -0.09 | 0.0622 | 0.2352 | -0.102 | 0.5129 |
| Q76A_1 | 0.1027 | 0.0643 | 0.2069 | -0.0186 | 0.2728 | -0.0094 | -0.1479 | 0.0832 | -0.0079 | -0.2172 | 0.0446 | -0.0619 | 0.0948 | 0.0657 | -0.0763 | 0.0101 | -0.2043 | 0.0344 | 0.2597 | 0.0945 | 0.6685 |
| Q76B_1 | 0.1216 | 0.3291 | 0.1325 | -0.1055 | 0.0816 | -0.0845 | -0.2185 | 0.2997 | -0.2237 | -0.0867 | -0.0813 | -0.2839 | 0.0053 | 0.046 | 0.0831 | -0.0045 | 0.0002 | -0.1661 | 0.1544 | -0.0161 | 0.4726 |
| Q78_1 | 0.1041 | -0.0402 | -0.0077 | -0.0133 | -0.0217 | -0.0466 | 0.0652 | 0.0938 | 0.2109 | 0.0372 | 0.2227 | -0.139 | 0.2 | 0.053 | -0.0118 | -0.0122 | 0.022 | 0.2537 | -0.2442 | 0.0106 | 0.7075 |
| Q85A_1 | -0.0016 | -0.0862 | 0.075 | -0.1619 | -0.1271 | 0.1908 | 0.2445 | -0.4322 | -0.0432 | 0.0512 | -0.0128 | 0.0999 | 0.2324 | 0.0281 | 0.1475 | 0.013 | 0.1142 | 0.0289 | 0.0221 | 0.1594 | 0.5468 |
| Q85B_1 | -0.2044 | 0.1544 | -0.263 | 0.1142 | 0.0572 | -0.013 | 0.0798 | 0.1411 | 0.2342 | -0.1032 | -0.0388 | -0.0491 | 0.1529 | -0.0499 | -0.0285 | 0.063 | -0.0829 | 0.07 | 0.5593 | -0.0741 | 0.5234 |
| Q85C_1 | -0.0787 | 0.5088 | 0.1161 | -0.0335 | -0.059 | 0.0094 | 0.0439 | -0.0215 | -0.0307 | 0.0432 | -0.2953 | -0.0946 | 0.1052 | -0.0776 | -0.0644 | 0.095 | -0.0574 | -0.0827 | 0.1687 | 0.0924 | 0.4872 |
| Q87_1 | 0.403 | -0.097 | -0.1901 | -0.1963 | -0.0308 | -0.0836 | -0.0896 | -0.1918 | -0.0711 | 0.1588 | 0.1744 | 0.1506 | 0 | -0.0512 | -0.0546 | 0.0006 | 0.1019 | 0.0126 | -0.0821 | -0.218 | 0.5288 |
| Q88B_1 | 0.1069 | -0.1399 | 0.2616 | 0.1517 | -0.0363 | 0.0012 | 0.0966 | -0.1421 | 0.1938 | -0.1206 | -0.0065 | 0.0785 | -0.096 | 0.0136 | -0.1149 | 0.3546 | -0.0135 | -0.104 | -0.1072 | -0.0423 | 0.6654 |
| Q89A_1 | -0.3923 | -0.0221 | 0.4656 | 0.1734 | 0.0063 | 0.0441 | 0.0378 | 0.2331 | 0.1001 | -0.054 | 0.0807 | 0.0503 | -0.0316 | -0.1318 | -0.0732 | -0.1554 | -0.1854 | -0.2244 | 0.0964 | 0.0522 | 0.3279 |
| Q8A_1 | -0.0108 | 0.113 | 0.2077 | -0.0579 | 0.1316 | -0.1175 | 0.378 | -0.1709 | -0.0863 | 0.042 | 0.1298 | -0.2001 | 0.0657 | -0.0035 | -0.0283 | -0.0555 | 0.1948 | 0.083 | 0.0512 | -0.0576 | 0.5716 |
| Q8B_1 | -0.2925 | 0.0252 | 0.0121 | 0.0104 | -0.1249 | -0.2317 | 0.1716 | -0.1059 | -0.2711 | -0.0644 | 0.0859 | -0.2558 | 0.1721 | 0.1607 | 0.0597 | 0.0197 | 0.269 | 0.0171 | 0.0276 | 0.0711 | 0.4181 |
| Q8C_1 | -0.3554 | 0.1287 | -0.0202 | 0.0507 | 0.1173 | -0.078 | 0.3477 | -0.3877 | -0.093 | -0.1134 | 0.0969 | -0.0406 | -0.1581 | 0.1807 | 0.05 | -0.0618 | 0.0965 | 0.2299 | -0.1572 | -0.0113 | 0.3952 |
| Q8D_1 | -0.0849 | 0.1476 | -0.096 | 0.1302 | 0.2387 | -0.0414 | 0.073 | -0.1663 | -0.0806 | -0.0636 | 0.298 | 0.047 | 0.0845 | -0.0449 | -0.0404 | -0.2066 | 0.2736 | 0.0293 | 0.0159 | 0.1122 | 0.5949 |
| Q8E_1 | -0.2443 | 0.1268 | -0.0288 | 0.102 | 0.0227 | -0.2379 | 0.3026 | 0.0051 | -0.0647 | -0.1224 | 0.0198 | 0.0012 | -0.0801 | 0.0576 | 0.1641 | -0.3904 | 0.1038 | 0.1557 | -0.0592 | 0.2344 | 0.4573 |
| Q90A_1 | -0.268 | -0.0759 | 0.337 | 0.1708 | 0.1076 | 0.0182 | -0.2917 | 0.1212 | 0.0952 | 0.0486 | 0.2921 | -0.1978 | -0.0346 | -0.0355 | 0.1317 | 0.1642 | 0.1169 | -0.0874 | 0.0645 | -0.0085 | 0.5354 |
| Q90B_1 | -0.0563 | -0.0748 | -0.1391 | 0.0256 | 0.0611 | 0.5605 | 0.0643 | 0.039 | 0.06 | -0.0105 | -0.1156 | -0.0517 | -0.0353 | 0.1908 | 0.1388 | -0.1159 | 0.055 | -0.0657 | 0.0886 | 0.0232 | 0.4913 |
| Q90C_1 | -0.0839 | 0.0117 | 0.0966 | 0.069 | -0.1944 | 0.2176 | -0.0913 | 0.2409 | 0.1736 | -0.035 | -0.0286 | -0.036 | 0.0986 | 0.0326 | 0.0847 | -0.2254 | -0.2147 | 0.0772 | 0.1691 | -0.0504 | 0.5979 |
| Q91A_1 | 0.002 | -0.0431 | 0.0733 | -0.0485 | 0.0383 | 0.8509 | 0.0016 | -0.1739 | -0.0205 | 0.093 | 0.0364 | -0.0347 | 0.0508 | 0.1148 | -0.0188 | 0.0002 | 0.0877 | 0.0102 | 0.1154 | 0.046 | 0.3236 |
| Q91B_1 | 0.0044 | -0.1162 | 0.0703 | -0.0571 | 0.0595 | 0.7959 | 0.0707 | -0.1393 | -0.0093 | 0.1176 | 0.1157 | -0.083 | -0.0753 | 0.005 | 0.0037 | 0.009 | 0.0359 | 0.0258 | 0.0954 | 0.0153 | 0.3934 |
| Q92_1 | -0.2808 | -0.0869 | 0.1574 | 0.0404 | 0.0595 | -0.098 | -0.1361 | 0.0718 | 0.0117 | -0.0525 | -0.0088 | -0.1249 | -0.2001 | -0.0294 | -0.0498 | -0.0807 | 0 | -0.0215 | -0.0634 | 0.2236 | 0.7106 |
| Q94_1 | 0.0328 | 0.1447 | -0.107 | -0.1661 | -0.1073 | 0.4525 | -0.0765 | -0.1644 | 0.0877 | 0.0123 | -0.1249 | -0.0679 | -0.0354 | 0.1448 | 0.1308 | 0.0071 | -0.0776 | 0.0358 | 0.0674 | -0.1263 | 0.5943 |

| UGANDA | Factor1 | Factor 2 | Factor3 | Factor 4 | Factor5 | Factor 6 | Factor7 | Factor 8 | Factor9 | Factor 10 | Factor 11 | Factor 12 | Factor13 | Factor 14 | Factor 15 | Factor 16 | Factor17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|--------|---------|----------|---------|----------|---------|----------|---------|----------|---------|-----------|-----------|-----------|----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|------------|
| Q95A_1 | -0.0098 | -0.111 | 0.0227 | -0.0129 | 0.0204 | -0.5236 | 0.0527 | -0.1585 | 0.0732 | 0.1527 | -0.0094 | -0.3975 | -0.0875 | 0.01 | 0.0757 | 0.0652 | -0.3356 | 0.0616 | -0.0772 | -0.03 | 0.3764 |
| Q95B_1 | 0.0078 | -0.1911 | -0.0432 | -0.0295 | -0.1331 | -0.3953 | 0.0214 | -0.1119 | -0.1451 | 0.0617 | 0.0203 | -0.215 | -0.0696 | -0.1091 | 0.0417 | -0.1026 | 0.0485 | 0.034 | 0.1539 | 0.1209 | 0.5404 |
| Q96_1 | -0.3591 | -0.0213 | 0.0667 | -0.05 | -0.1154 | 0.225 | -0.2783 | 0.1622 | 0.0375 | -0.0123 | 0.1486 | -0.1027 | 0.0357 | 0.0583 | 0.0033 | -0.0296 | -0.3131 | -0.0478 | 0.2808 | -0.0127 | 0.5295 |
| Q97_1 | -0.0764 | 0.3686 | 0.0511 | -0.1065 | -0.0969 | 0.5891 | -0.097 | 0.031 | 0.1838 | -0.044 | -0.3148 | 0.0037 | 0.0624 | -0.0058 | -0.1137 | 0.0611 | 0.0642 | 0.197 | 0.1279 | -0.1242 | 0.2732 |
| Q98B_1 | 0.0176 | 0.2488 | 0.2908 | -0.0636 | 0.1164 | 0.1547 | 0.0745 | 0.0754 | -0.0225 | 0.1981 | -0.2138 | 0.0325 | -0.0111 | 0.0397 | 0.0765 | 0.0313 | -0.1559 | 0.0172 | 0.0669 | 0.2225 | 0.5365 |
| Q9A_1 | 0.0818 | -0.0599 | 0.0578 | 0.1141 | 0.025 | 0.1175 | 0.0016 | 0.0079 | -0.0211 | 0.0173 | 0.0726 | 0.2442 | -0.0369 | 0.0058 | 0.2032 | 0.0983 | 0.8277 | 0.0204 | 0.0115 | 0.1415 | 0.3095 |
| Q9B_1 | 0.1425 | 0.0926 | -0.0312 | 0.1528 | 0.1058 | 0.1334 | -0.1185 | -0.1018 | 0.004 | 0.0647 | 0.0017 | -0.0411 | -0.0152 | 0.1824 | 0.0054 | 0.0493 | 0.5794 | -0.0805 | -0.2648 | -0.1377 | 0.5045 |

ALL NATIONS
 -Political Decentralization Together

```
GET
FILE='D:\OneDrive -
american.edu\Documents\Dissertation\DATA\ALLFINALINDEXCurrent\FinalFinal.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
GET
FILE='D:\OneDrive -
american.edu\Documents\Dissertation\DATA\ALLFINALINDEXCurrent\AllIncludingPolDecRedone.sav'.
DATASET NAME DataSet2 WINDOW=FRONT.
DATASET CLOSE DataSet1.
REGRESSION
/MISSING PAIRWISE
/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Participation
/METHOD=ENTER Pfinvolvement FiscalPower FairTreatment Corruption Confidence Authority
Approval Q1_1 Q101_1 Q97_1 LGRev SNUEthnicity PartyAgree PolDec.
```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|--|-------------------|--------|
| 1 | PolDec, Q101_1, SNUEthnicity, Approval, PartyAgree, Pfinvolvement, Q1_1, FairTreatment, Authority, Q97_1, Corruption, FiscalPower, Confidence, LGRev ^c | | Enter |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Within
 country weighting factor

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .425 ^a | .181 | .176 | .81656 |

a. Predictors: (Constant), PolDec, Q101_1, SNUEthnicity, Approval, PartyAgree, Pfinvolvement, Q1_1, FairTreatment, Authority, Q97_1, Corruption, FiscalPower, Confidence, LGRev

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|------|-------------|--------|-------------------|
| 1 Regression | 329.783 | 14 | 23.556 | 35.329 | .000 ^c |
| Residual | 1494.218 | 2241 | .667 | | |
| Total | 1824.001 | 2255 | | | |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Within country weighting factor

c. Predictors: (Constant), PolDec, Q101_1, SNUEthnicity, Approval, PartyAgree, Pfinvolvement, Q1_1, FairTreatment, Authority, Q97_1, Corruption, FiscalPower, Confidence, LGRev

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| 1 (Constant) | -.108 | .112 | | -.959 | .338 |
| Pfinvolvement | .037 | .021 | .036 | 1.751 | .080 |
| FiscalPower | -.046 | .022 | -.047 | -2.091 | .037 |
| FairTreatment | .070 | .021 | .070 | 3.325 | .001 |
| Corruption | .076 | .022 | .076 | 3.449 | .001 |
| Confidence | .056 | .023 | .058 | 2.393 | .017 |
| Authority | .064 | .019 | .066 | 3.284 | .001 |
| Approval | .048 | .022 | .049 | 2.134 | .033 |
| Q1_1 | .011 | .001 | .169 | 8.281 | .000 |
| Q101_1 | -.306 | .035 | -.170 | -8.626 | .000 |
| Q97_1 | .059 | .010 | .126 | 5.944 | .000 |
| LGRev | -.010 | .002 | -.158 | -6.427 | .000 |
| SNUEthnicity | -.038 | .023 | -.032 | -1.643 | .101 |
| PartyAgree | .310 | .036 | .171 | 8.600 | .000 |
| PolDec | -.152 | .033 | -.102 | -4.581 | .000 |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Within country weighting factor

-Political Decentralization (Strength and Spatial) Separated

REGRESSION

```

/MISSING PAIRWISE
/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Participation
/METHOD=ENTER Pfinvolvement FiscalPower FairTreatment Corruption Confidence Authority
Approval Q1_1 Q101_1 Q97_1 LGRev SNUethnicity PartyAgree spatial strengthB.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | strengthB, Q101_1, PartyAgree, Authority, spatial, Q1_1, Approval, SNUethnicity, Pfinvolvement, FairTreatment, Q97_1, Corruption, FiscalPower, Confidence, LGRev ^c | | Enter |

- a. Dependent Variable: Participation
b. Weighted Least Squares Regression - Weighted by Within country weighting factor
c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .422 ^a | .178 | .172 | .81820 |

- a. Predictors: (Constant), strengthB, Q101_1, PartyAgree, Authority, spatial, Q1_1, Approval, SNUethnicity, Pfinvolvement, FairTreatment, Q97_1, Corruption, FiscalPower, Confidence, LGRev

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|------|-------------|--------|-------------------|
| 1 Regression | 324.433 | 15 | 21.629 | 32.308 | .000 ^c |
| Residual | 1499.568 | 2240 | .669 | | |
| Total | 1824.001 | 2255 | | | |

- a. Dependent Variable: Participation
b. Weighted Least Squares Regression - Weighted by Within country weighting factor
c. Predictors: (Constant), strengthB, Q101_1, PartyAgree, Authority, spatial, Q1_1, Approval, SNUethnicity, Pfinvolvement, FairTreatment, Q97_1, Corruption, FiscalPower, Confidence, LGRev

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|------------|---------------------------|---|------|
| | B | Std. Error | Beta | | |

| | | | | | | |
|---|---------------|-------|------|-------|--------|------|
| 1 | (Constant) | .192 | .119 | | 1.620 | .105 |
| | Pfinvolvement | .061 | .022 | .059 | 2.821 | .005 |
| | FiscalPower | -.002 | .023 | -.002 | -.101 | .920 |
| | FairTreatment | .031 | .022 | .031 | 1.384 | .167 |
| | Corruption | .071 | .022 | .071 | 3.218 | .001 |
| | Confidence | .040 | .024 | .041 | 1.673 | .094 |
| | Authority | .055 | .020 | .057 | 2.793 | .005 |
| | Approval | .040 | .023 | .041 | 1.793 | .073 |
| | Q1_1 | .011 | .001 | .173 | 8.466 | .000 |
| | Q101_1 | -.304 | .036 | -.169 | -8.549 | .000 |
| | Q97_1 | .048 | .010 | .102 | 4.901 | .000 |
| | LGRev | -.019 | .003 | -.294 | -7.595 | .000 |
| | SNUethnicity | -.023 | .024 | -.020 | -.995 | .320 |
| | PartyAgree | .302 | .036 | .167 | 8.330 | .000 |
| | spatial | .063 | .028 | .077 | 2.240 | .025 |
| | strengthB | -.161 | .051 | -.069 | -3.176 | .002 |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Within country weighting factor

REGRESSION

```

/MISSING PAIRWISE
/REGWGT=combinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Participation
/METHOD=ENTER Pfinvolvement FiscalPower FairTreatment Corruption Confidence Authority
Approval Q1_1 Q101_1 Q97_1 LGRev SNUethnicity PartyAgree spatial strengthB.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|-------------------|-------------------|--------|
|-------|-------------------|-------------------|--------|

| | | | |
|---|--|---|-------|
| 1 | strengthB, Pfinvolvement, PartyAgree, Q101_1, Authority, spatial, Q1_1, SNUEthnicity, Approval, FairTreatment, Q97_1, Corruption, FiscalPower, Confidence, LGRev ^c | . | Enter |
|---|--|---|-------|

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .431 ^a | .186 | .180 | .64736 |

a. Predictors: (Constant), strengthB, Pfinvolvement, PartyAgree, Q101_1, Authority, spatial, Q1_1, SNUEthnicity, Approval, FairTreatment, Q97_1, Corruption, FiscalPower, Confidence, LGRev

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 214.311 | 15 | 14.287 | 34.092 | .000 ^c |
| | Residual | 938.737 | 2240 | .419 | | |
| | Total | 1153.047 | 2255 | | | |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. Predictors: (Constant), strengthB, Pfinvolvement, PartyAgree, Q101_1, Authority, spatial, Q1_1, SNUEthnicity, Approval, FairTreatment, Q97_1, Corruption, FiscalPower, Confidence, LGRev

Coefficients^{a,b}

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|---------------------------|---|------|
|-------|-----------------------------|---------------------------|---|------|

| | B | Std. Error | Beta | | |
|---------------|-------|------------|-------|---------|------|
| (Constant) | .293 | .121 | | 2.427 | .015 |
| Pfinvolvement | .091 | .021 | .089 | 4.246 | .000 |
| FiscalPower | .020 | .024 | .020 | .831 | .406 |
| FairTreatment | .005 | .023 | .005 | .230 | .818 |
| Corruption | .064 | .022 | .065 | 2.948 | .003 |
| Confidence | .009 | .023 | .009 | .367 | .714 |
| Authority | .040 | .020 | .041 | 2.030 | .042 |
| Approval | .029 | .022 | .029 | 1.287 | .198 |
| Q1_1 | .011 | .001 | .178 | 8.729 | .000 |
| Q101_1 | -.287 | .035 | -.161 | -8.183 | .000 |
| Q97_1 | .044 | .009 | .099 | 4.761 | .000 |
| LGREv | -.030 | .003 | -.409 | -10.125 | .000 |
| SNUEthnicity | -.018 | .026 | -.013 | -.680 | .496 |
| PartyAgree | .350 | .041 | .172 | 8.627 | .000 |
| spatial | .146 | .027 | .188 | 5.332 | .000 |
| strengthB | -.218 | .048 | -.099 | -4.512 | .000 |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

UGANDA

-Political Decentralization Together

```
GET
  FILE='D:\OneDrive -
american.edu\Documents\Dissertation\DATA\UGANDAFINALINDEXcurrent\UG.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
REGRESSION
  /MISSING PAIRWISE
  /REGWGT=withinwt
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Participation
  /METHOD=ENTER Pfinvolvement FiscalPower FairTreatment Corruption Confidence Authority
Approval Q1_1 Q101_1 Q97_1 LGREV SNUEthnicity PartyAgree PolDec.
```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|-------------------|-------------------|--------|
|-------|-------------------|-------------------|--------|

| | | | |
|---|---|---|-------|
| 1 | PolDec, Corruption, SNUEthnicity, Pfinvolvement, Q1_1, PartyAgree, Q101_1, FiscalPower, FairTreatment, Authority, Q97_1, Approval, LGREV, Confidence ^c | . | Enter |
|---|---|---|-------|

- a. Dependent Variable: Participation
- b. Weighted Least Squares Regression - Weighted by withinwt
- c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .452 ^a | .204 | .199 | .80419 |

- a. Predictors: (Constant), PolDec, Corruption, SNUEthnicity, Pfinvolvement, Q1_1, PartyAgree, Q101_1, FiscalPower, FairTreatment, Authority, Q97_1, Approval, LGREV, Confidence

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|------|-------------|--------|-------------------|
| 1 Regression | 368.655 | 14 | 26.333 | 40.717 | .000 ^c |
| Residual | 1437.015 | 2222 | .647 | | |
| Total | 1805.670 | 2236 | | | |

- a. Dependent Variable: Participation
- b. Weighted Least Squares Regression - Weighted by withinwt
- c. Predictors: (Constant), PolDec, Corruption, SNUEthnicity, Pfinvolvement, Q1_1, PartyAgree, Q101_1, FiscalPower, FairTreatment, Authority, Q97_1, Approval, LGREV, Confidence

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---------------|-----------------------------|------------|---------------------------|-------|------|
| | B | Std. Error | Beta | | |
| 1 (Constant) | .016 | .115 | | .141 | .888 |
| Pfinvolvement | .123 | .022 | .111 | 5.717 | .000 |

| | | | | | |
|---------------|-------|------|-------|---------|------|
| FiscalPower | .150 | .021 | .150 | 7.098 | .000 |
| FairTreatment | .103 | .022 | .102 | 4.652 | .000 |
| Corruption | .144 | .022 | .140 | 6.619 | .000 |
| Confidence | .005 | .024 | .006 | .225 | .822 |
| Authority | .061 | .021 | .063 | 2.948 | .003 |
| Approval | .106 | .023 | .109 | 4.647 | .000 |
| Q1_1 | .008 | .001 | .119 | 5.887 | .000 |
| Q101_1 | -.372 | .036 | -.207 | -10.453 | .000 |
| Q97_1 | .017 | .010 | .037 | 1.707 | .088 |
| LGREV | -.046 | .011 | -.092 | -4.100 | .000 |
| SNUEthnicity | .073 | .022 | .063 | 3.315 | .001 |
| PartyAgree | .128 | .037 | .069 | 3.438 | .001 |
| PolDec | -.106 | .025 | -.094 | -4.189 | .000 |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by withinwt

-Political Decentralization Separate

REGRESSION

/MISSING PAIRWISE

/REGWGT=withinwt

/STATISTICS COEFF OUTS R ANOVA

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT Participation

_1 Q101_1 Q97_1 LGREV SNUEthnicity PartyAgree spatial strengthB.

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | strengthB, Q101_1, PartyAgree, Pfinvolvement, spatial, Authority, Q1_1, SNUEthnicity, FiscalPower, FairTreatment, Corruption, Q97_1, Approval, LGREV, Confidence ^c | | Enter |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by withinwt

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .453 ^a | .205 | .199 | .80402 |

a. Predictors: (Constant), strengthB, Q101_1, PartyAgree, Pfinvolvement, spatial, Authority, Q1_1, SNUEthnicity, FiscalPower, FairTreatment, Corruption, Q97_1, Approval, LGREV, Confidence

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 369.896 | 15 | 24.660 | 38.146 | .000 ^c |
| | Residual | 1435.774 | 2221 | .646 | | |
| | Total | 1805.670 | 2236 | | | |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by withinwt

c. Predictors: (Constant), strengthB, Q101_1, PartyAgree, Pfinvolvement, spatial, Authority, Q1_1, SNUEthnicity, FiscalPower, FairTreatment, Corruption, Q97_1, Approval, LGREV, Confidence

Coefficients^{a,b}

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|---------------|-----------------------------|------------|---------------------------|---------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .041 | .121 | | .339 | .735 |
| | Pfinvolvement | .122 | .022 | .110 | 5.643 | .000 |
| | FiscalPower | .150 | .021 | .150 | 7.075 | .000 |
| | FairTreatment | .103 | .022 | .102 | 4.661 | .000 |
| | Corruption | .145 | .022 | .141 | 6.655 | .000 |
| | Confidence | .009 | .024 | .009 | .362 | .718 |
| | Authority | .062 | .021 | .065 | 3.037 | .002 |
| | Approval | .104 | .023 | .107 | 4.585 | .000 |
| | Q1_1 | .008 | .001 | .119 | 5.858 | .000 |
| | Q101_1 | -.373 | .036 | -.208 | -10.481 | .000 |
| | Q97_1 | .017 | .010 | .038 | 1.737 | .083 |
| | LGREV | -.038 | .012 | -.075 | -3.037 | .002 |
| | SNUEthnicity | .065 | .023 | .056 | 2.880 | .004 |
| | PartyAgree | .124 | .037 | .067 | 3.332 | .001 |
| | spatial | -.089 | .020 | -.107 | -4.367 | .000 |
| | strengthB | -.028 | .067 | -.008 | -.419 | .675 |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by withinwt

TANZANIA

-With Spatial Decentralization

GET

```

FILE='D:\OneDrive -
american.edu\Documents\Dissertation\DATA\TANZANIAFINALINDEXcurrent\TZFINAL.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
REGRESSION
  /MISSING PAIRWISE
  /REGWGT=withinwt
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Participation
  LGRev Q1_1 Q101_1 Q97_1 PartyAgree SNUEthnicity spatial.

```

Regression

| Variables Entered/Removed ^{a,b} | | | |
|--|--|-------------------|--------|
| Model | Variables Entered | Variables Removed | Method |
| 1 | spatial, Q101_1, Authority, FairTreatment, FiscalPower, PartyAgree, SNUEthnicity, Q97_1, Pfinvolvement, Q1_1, Approval, Corruption, Confidence, LGRev ^c | | Enter |

- a. Dependent Variable: Participation
- b. Weighted Least Squares Regression - Weighted by Within-country weighting factor
- c. All requested variables entered.

| Model Summary | | | | |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .424 ^a | .179 | .174 | .80426 |

- a. Predictors: (Constant), spatial, Q101_1, Authority, FairTreatment, FiscalPower, PartyAgree, SNUEthnicity, Q97_1, Pfinvolvement, Q1_1, Approval, Corruption, Confidence, LGRev

| ANOVA ^{a,b} | | | | | | |
|----------------------|------------|----------------|----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 287.402 | 14 | 20.529 | 31.738 | .000 ^c |

| | | | | | |
|----------|----------|------|------|--|--|
| Residual | 1315.001 | 2033 | .647 | | |
| Total | 1602.403 | 2047 | | | |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Within-country weighting factor

c. Predictors: (Constant), spatial, Q101_1, Authority, FairTreatment, FiscalPower, PartyAgree, SNUEthnicity, Q97_1, Pfinvolvement, Q1_1, Approval, Corruption, Confidence, LGRev

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| 1 | (Constant) | -.472 | .133 | -3.546 | .000 |
| | Pfinvolvement | .071 | .023 | .068 | .002 |
| | FiscalPower | -.022 | .021 | -.023 | .284 |
| | FairTreatment | .205 | .022 | .203 | .000 |
| | Corruption | .145 | .024 | .146 | .000 |
| | Confidence | .052 | .024 | .056 | .028 |
| | Authority | .052 | .020 | .055 | .009 |
| | Approval | .023 | .022 | .025 | .294 |
| | LGRev | .001 | .004 | .007 | .824 |
| | Q1_1 | .011 | .001 | .168 | .000 |
| | Q101_1 | -.248 | .037 | -.140 | .000 |
| | Q97_1 | .094 | .014 | .142 | .000 |
| | PartyAgree | .200 | .039 | .111 | .000 |
| | SNUEthnicity | .008 | .025 | .007 | .741 |
| | spatial | -.199 | .038 | -.168 | .000 |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Within-country weighting factor

GHANA

-With Spatial Decentralization

GET


```

FILE='D:\OneDrive -
american.edu\Documents\Dissertation\DATA\GHANAFINALINDEXcurrent\Ghana.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
REGRESSION
  /MISSING PAIRWISE
  /REGWGT=withinwt
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Participation
  /METHOD=ENTER Pfinvolvement FiscalPower FairTreatment Corruption Confidence Authority
Approval Q1_1 Q101_1 Q97_1 LGRev SNUEthnicity PartyAgree spatial.

```

Regression

| Variables Entered/Removed ^{a,b} | | | |
|--|--|-------------------|--------|
| Model | Variables Entered | Variables Removed | Method |
| 1 | spatial, Q101_1, Approval, Pfinvolvement, FairTreatment, PartyAgree, Q1_1, Corruption, SNUEthnicity, Authority, Q97_1, Confidence, FiscalPower, LGRev ^c | | Enter |

- a. Dependent Variable: Participation
- b. Weighted Least Squares Regression - Weighted by Within country weighting variable
- c. All requested variables entered.

| Model Summary | | | | |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .397 ^a | .158 | .153 | .84571 |

- a. Predictors: (Constant), spatial, Q101_1, Approval, Pfinvolvement, FairTreatment, PartyAgree, Q1_1, Corruption, SNUEthnicity, Authority, Q97_1, Confidence, FiscalPower, LGRev

| ANOVA ^{a,b} | | | | | | |
|----------------------|------------|----------------|------|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 318.295 | 14 | 22.735 | 31.787 | .000 ^c |
| | Residual | 1697.958 | 2374 | .715 | | |

| | | | | | |
|-------|----------|------|--|--|--|
| Total | 2016.253 | 2388 | | | |
|-------|----------|------|--|--|--|

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Within country weighting variable

c. Predictors: (Constant), spatial, Q101_1, Approval, Pfinvolvement, FairTreatment, PartyAgree, Q1_1, Corruption, SNUEthnicity, Authority, Q97_1, Confidence, FiscalPower, LGRev

| Coefficients ^{a,b} | | | | | | |
|-----------------------------|---------------|-----------------------------|------------|---------------------------|---------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .244 | .112 | | 2.182 | .029 |
| | Pfinvolvement | .097 | .020 | .093 | 4.816 | .000 |
| | FiscalPower | -.090 | .027 | -.089 | -3.374 | .001 |
| | FairTreatment | .035 | .020 | .034 | 1.736 | .083 |
| | Corruption | .045 | .020 | .045 | 2.251 | .024 |
| | Confidence | .110 | .023 | .114 | 4.747 | .000 |
| | Authority | .066 | .020 | .067 | 3.365 | .001 |
| | Approval | .039 | .025 | .041 | 1.522 | .128 |
| | Q1_1 | .009 | .001 | .147 | 7.308 | .000 |
| | Q101_1 | -.413 | .036 | -.225 | -11.501 | .000 |
| | Q97_1 | .066 | .010 | .144 | 6.599 | .000 |
| | LGRev | -.004 | .002 | -.067 | -2.192 | .028 |
| | SNUEthnicity | -.069 | .024 | -.056 | -2.850 | .004 |
| | PartyAgree | .253 | .037 | .132 | 6.824 | .000 |
| | spatial | -.049 | .023 | -.064 | -2.092 | .037 |

a. Dependent Variable: Participation

b. Weighted Least Squares Regression - Weighted by Within country weighting variable

RE-EVALUATING INFLUENCES ON PARTICIPATION

ALL NATIONS-POLITICAL DECENTRALIZATION

Dependent Variable-Corruption

```
GET
FILE='C:\Users\chase\OneDrive - american.edu\Documents\Dissertation\DATA\ALLFINALINDEXCurrent\AllIncludingPolDecRedone.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
```

```

REGRESSION
  /MISSING PAIRWISE
  /REGWGT=combinwt
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Corruption
  /METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence
Authority Approval Q1_1 Q101_1 Q97_1 LGRev SNUethnicity PartyAgree PolDec.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|--|-------------------|--------|
| 1 | PolDec, Q101_1, Approval, SNUethnicity, PartyAgree, Pfinvolvement, Q1_1, Authority, FairTreatment, Participation, Q97_1, FiscalPower, Confidence, LGRev ^c | | Enter |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .511 ^a | .261 | .256 | .62960 |

a. Predictors: (Constant), PolDec, Q101_1, Approval, SNUethnicity, PartyAgree, Pfinvolvement, Q1_1, Authority, FairTreatment, Participation, Q97_1, FiscalPower, Confidence, LGRev

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 313.108 | 14 | 22.365 | 56.420 | .000 ^c |
| | Residual | 888.327 | 2241 | .396 | | |

| | | | | | |
|-------|----------|------|--|--|--|
| Total | 1201.435 | 2255 | | | |
|-------|----------|------|--|--|--|

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. Predictors: (Constant), PolDec, Q101_1, Approval, SNUethnicity, PartyAgree, Pfinvolvement, Q1_1, Authority, FairTreatment, Participation, Q97_1, FiscalPower, Confidence, LGRev

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|------------|---------------------------|-------|------|
| | B | Std. Error | Beta | | |
| 1 | (Constant) | .125 | .111 | 1.119 | .263 |
| | Pfinvolvement | .024 | .021 | .023 | .242 |
| | FiscalPower | -.086 | .022 | -.084 | .000 |
| | Participation | .065 | .020 | .064 | .002 |
| | FairTreatment | .166 | .020 | .163 | .000 |
| | Confidence | -.309 | .021 | -.320 | .000 |
| | Authority | .037 | .019 | .038 | .049 |
| | Approval | -.089 | .022 | -.088 | .000 |
| | Q1_1 | -.001 | .001 | -.020 | .301 |
| | Q101_1 | -.061 | .035 | -.034 | .078 |
| | Q97_1 | .000 | .009 | .001 | .973 |
| | LGRev | -.002 | .002 | -.025 | .282 |
| | SNUethnicity | .028 | .025 | .020 | .266 |
| | PartyAgree | -.151 | .040 | -.072 | .000 |
| | PolDec | .022 | .030 | .016 | .456 |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

Dependent Variable-Authority

REGRESSION

/MISSING PAIRWISE

/REGWGT=combinwt

/STATISTICS COEFF OUTS R ANOVA

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT Authority

/METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence Approval Q1_1 Q101_1 Q97_1 LGRev SNUethnicity PartyAgree PolDec Corruption.

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | Corruption, LGRev, Q1_1, SNUEthnicity, Q101_1, PartyAgree, Approval, Pfinvolvement, FairTreatment, Q97_1, Participation, FiscalPower, PolDec, Confidence ^c | . | Enter |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .319 ^a | .102 | .096 | .70959 |

a. Predictors: (Constant), Corruption, LGRev, Q1_1, SNUEthnicity, Q101_1, PartyAgree, Approval, Pfinvolvement, FairTreatment, Q97_1, Participation, FiscalPower, PolDec, Confidence

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|------|-------------|--------|-------------------|
| 1 Regression | 127.539 | 14 | 9.110 | 18.093 | .000 ^c |
| Residual | 1128.389 | 2241 | .504 | | |
| Total | 1255.928 | 2255 | | | |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. Predictors: (Constant), Corruption, LGRev, Q1_1, SNUEthnicity, Q101_1, PartyAgree, Approval, Pfinvolvement, FairTreatment, Q97_1, Participation, FiscalPower, PolDec, Confidence

| Coefficients ^{a,b} | | | | | |
|-----------------------------|-----------------------------|------------|---------------------------|-------|------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| 1 | (Constant) | .158 | .125 | 1.262 | .207 |
| | Pfinvolvement | -.066 | .023 | -.061 | .283 |
| | FiscalPower | -.045 | .024 | -.043 | .185 |
| | Participation | .076 | .023 | .073 | .001 |
| | FairTreatment | .087 | .023 | .084 | .000 |
| | Confidence | -.025 | .025 | -.025 | .320 |
| | Approval | -.143 | .024 | -.139 | .000 |
| | Q1_1 | -.001 | .001 | -.012 | .573 |
| | Q101_1 | .004 | .039 | .002 | .926 |
| | Q97_1 | .045 | .010 | .096 | .000 |
| | LGRev | -.008 | .002 | -.110 | .000 |
| | SNUEthnicity | -.077 | .028 | -.056 | .006 |
| | PartyAgree | -.005 | .045 | -.002 | .907 |
| | PolDec | .070 | .034 | .048 | .037 |
| | Corruption | .047 | .024 | .046 | .049 |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

Dependent Variable-Approval

```

REGRESSION
  /MISSING PAIRWISE
  /REGWGT=combinwt
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Approval
  /METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence Q1_1
  Q101_1 Q97_1 LGRev SNUEthnicity PartyAgree PolDec Corruption Authority.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | Authority, PartyAgree, Q101_1, SNUEthnicity, PolDec, Pfinvolvement, Q1_1, FairTreatment, FiscalPower, Participation, Corruption, Q97_1, Confidence, LGRev ^c | | Enter |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .541 ^a | .293 | .288 | .61202 |

a. Predictors: (Constant), Authority, PartyAgree, Q101_1, SNUEthnicity, PolDec, Pfinvolvement, Q1_1, FairTreatment, FiscalPower, Participation, Corruption, Q97_1, Confidence, LGRev

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 347.482 | 14 | 24.820 | 66.264 | .000 ^c |
| | Residual | 839.398 | 2241 | .375 | | |
| | Total | 1186.880 | 2255 | | | |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. Predictors: (Constant), Authority, PartyAgree, Q101_1, SNUEthnicity, PolDec, Pfinvolvement, Q1_1, FairTreatment, FiscalPower, Participation, Corruption, Q97_1, Confidence, LGRev

| Coefficients ^{a,b} | | | | | |
|-----------------------------|-----------------------------|------------|---------------------------|-------|--------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| 1 | (Constant) | -.076 | .108 | -.701 | .484 |
| | Pfinvolvement | .082 | .020 | .079 | .4122 |
| | FiscalPower | .233 | .020 | .229 | 11.430 |
| | Participation | .039 | .020 | .038 | 1.955 |
| | FairTreatment | -.031 | .020 | -.031 | -1.553 |
| | Confidence | .307 | .021 | .319 | 14.842 |
| | Q1_1 | -.001 | .001 | -.020 | -1.044 |
| | Q101_1 | .043 | .034 | .024 | 1.278 |
| | Q97_1 | .048 | .009 | .105 | 5.351 |
| | LGRev | .000 | .002 | -.002 | -.065 |
| | SNUEthnicity | -.022 | .024 | -.017 | -.921 |
| | PartyAgree | -.123 | .039 | -.060 | -3.189 |
| | PolDec | .036 | .029 | .025 | 1.236 |
| | Corruption | -.084 | .020 | -.084 | -4.091 |
| | Authority | -.106 | .018 | -.109 | -5.871 |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

SPATIAL & STRENGTH

Dependent Variable-Corruption

REGRESSION

```

/MISSING PAIRWISE
/REGWGT=combinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Corruption
/METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence Q1_1
Q101_1 Q97_1 LGRev SNUEthnicity PartyAgree Authority Approval spatial strengthB.

```


Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | strengthB, Pfinvolvement, PartyAgree, Q101_1, Authority, spatial, Q1_1, SNUEthnicity, Approval, FairTreatment, Participation, Q97_1, FiscalPower, Confidence, LGRev ^c | | Enter |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .513 ^a | .263 | .258 | .62870 |

a. Predictors: (Constant), strengthB, Pfinvolvement, PartyAgree, Q101_1, Authority, spatial, Q1_1, SNUEthnicity, Approval, FairTreatment, Participation, Q97_1, FiscalPower, Confidence, LGRev

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|-------|----------------|----|-------------|---|------|
|-------|----------------|----|-------------|---|------|

| | | | | | | |
|---|------------|----------|------|--------|--------|-------------------|
| 1 | Regression | 316.030 | 15 | 21.069 | 53.302 | .000 ^c |
| | Residual | 885.405 | 2240 | .395 | | |
| | Total | 1201.435 | 2255 | | | |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. Predictors: (Constant), strengthB, Pfinvolvement, PartyAgree, Q101_1, Authority, spatial, Q1_1, SNUEthnicity, Approval, FairTreatment, Participation, Q97_1, FiscalPower, Confidence, LGRev

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|------------|---------------------------|-------|------|
| | B | Std. Error | Beta | | |
| 1 | (Constant) | .175 | .117 | 1.493 | .136 |
| | Pfinvolvement | .024 | .021 | .023 | .259 |
| | FiscalPower | -.076 | .023 | -.075 | .333 |
| | Participation | .060 | .020 | .059 | .294 |
| | FairTreatment | .161 | .022 | .157 | .409 |
| | Confidence | -.308 | .022 | -.319 | .104 |
| | Q1_1 | -.001 | .001 | -.017 | .388 |
| | Q101_1 | -.060 | .035 | -.033 | .172 |
| | Q97_1 | .001 | .009 | .002 | .905 |
| | LGRev | -.001 | .003 | -.019 | .483 |
| | SNUEthnicity | .043 | .026 | .032 | .675 |
| | PartyAgree | -.159 | .040 | -.076 | .397 |
| | Authority | .039 | .019 | .039 | .203 |
| | Approval | -.089 | .022 | -.089 | .412 |
| | spatial | -.012 | .027 | -.015 | .431 |
| | strengthB | -.120 | .047 | -.053 | .255 |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

Dependent Variable-Authority

```
REGRESSION
/MISSING PAIRWISE
/REGWGT=combinwt
/STATISTICS COEFF OUTS R ANOVA
```

```

/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Authority
/METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence Q1_1
Q101_1 Q97_1 LGRev SNUethnicity PartyAgree Approval spatial strengthB Corruption.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|--|-------------------|--------|
| 1 | Corruption, spatial, Q101_1, SNUethnicity, Q1_1, Pfinvolvement, PartyAgree, strengthB, Approval, Participation, Q97_1, FairTreatment, FiscalPower, Confidence, LGRev ^c | | Enter |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .361 ^a | .130 | .124 | .69838 |

a. Predictors: (Constant), Corruption, spatial, Q101_1, SNUethnicity, Q1_1, Pfinvolvement, PartyAgree, strengthB, Approval, Participation, Q97_1, FairTreatment, FiscalPower, Confidence, LGRev

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 163.389 | 15 | 10.893 | 22.333 | .000 ^c |
| | Residual | 1092.539 | 2240 | .488 | | |
| | Total | 1255.928 | 2255 | | | |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. Predictors: (Constant), Corruption, spatial, Q101_1, SNUEthnicity, Q1_1, Pfinvolvement, PartyAgree, strengthB, Approval, Participation, Q97_1, FairTreatment, FiscalPower, Confidence, LGRev

Coefficients^{a,b}

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|---------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .428 | .130 | | 3.291 | .001 |
| | Pfinvolvement | -.027 | .023 | -.025 | -1.146 | .252 |
| | FiscalPower | .017 | .026 | .016 | .673 | .501 |
| | Participation | .046 | .023 | .044 | 2.030 | .042 |
| | FairTreatment | .022 | .024 | .021 | .899 | .368 |
| | Confidence | -.070 | .025 | -.071 | -2.774 | .006 |
| | Q1_1 | .000 | .001 | -.003 | -.146 | .884 |
| | Q101_1 | .006 | .038 | .003 | .147 | .883 |
| | Q97_1 | .046 | .010 | .097 | 4.532 | .000 |
| | LGRev | -.030 | .003 | -.392 | -9.377 | .000 |
| | SNUEthnicity | -.050 | .028 | -.036 | -1.750 | .080 |
| | PartyAgree | .031 | .045 | .015 | .707 | .479 |
| | Approval | -.154 | .024 | -.149 | -6.405 | .000 |
| | spatial | .258 | .029 | .319 | 8.826 | .000 |
| | strengthB | -.141 | .052 | -.061 | -2.694 | .007 |
| | Corruption | .048 | .023 | .047 | 2.031 | .042 |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

```

REGRESSION
  /MISSING PAIRWISE
  /REGWGT=combinwt
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Approval
  /METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence Q1_1
Q101_1 Q97_1 LGRev SNUEthnicity PartyAgree spatial strengthB Corruption Authority.

```

Regression

| Variables Entered/Removed ^{a,b} | | | |
|--|---|-------------------|--------|
| Model | Variables Entered | Variables Removed | Method |
| 1 | Authority, PartyAgree, Q101_1, SNUEthnicity, Pfinvolvement, Q97_1, FairTreatment, spatial, FiscalPower, Participation, strengthB, Q1_1, Corruption, Confidence, LGRev ^c | | Enter |

- a. Dependent Variable: Approval
- b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor
- c. All requested variables entered.

| Model Summary | | | | |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .546 ^a | .298 | .293 | .61006 |

a. Predictors: (Constant), Authority, PartyAgree, Q101_1, SNUEthnicity, Pfinvolvement, Q97_1, FairTreatment, spatial, FiscalPower, Participation, strengthB, Q1_1, Corruption, Confidence, LGRev

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 353.226 | 15 | 23.548 | 63.274 | .000 ^c |
| | Residual | 833.655 | 2240 | .372 | | |
| | Total | 1186.880 | 2255 | | | |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

c. Predictors: (Constant), Authority, PartyAgree, Q101_1, SNUEthnicity, Pfinvolvement, Q97_1, FairTreatment, spatial, FiscalPower, Participation, strengthB, Q1_1, Corruption, Confidence, LGRev

Coefficients^{a,b}

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|---------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .067 | .114 | | .586 | .558 |
| | Pfinvolvement | .096 | .020 | .092 | 4.765 | .000 |
| | FiscalPower | .261 | .022 | .256 | 12.090 | .000 |
| | Participation | .026 | .020 | .025 | 1.287 | .198 |
| | FairTreatment | -.059 | .021 | -.058 | -2.791 | .005 |
| | Confidence | .286 | .021 | .298 | 13.447 | .000 |
| | Q1_1 | -.001 | .001 | -.014 | -.752 | .452 |
| | Q101_1 | .044 | .034 | .024 | 1.320 | .187 |
| | Q97_1 | .049 | .009 | .106 | 5.527 | .000 |
| | LGRev | -.009 | .003 | -.116 | -3.036 | .002 |
| | SNUEthnicity | -.004 | .025 | -.003 | -.143 | .887 |
| | PartyAgree | -.113 | .039 | -.055 | -2.917 | .004 |
| | spatial | .096 | .026 | .122 | 3.699 | .000 |
| | strengthB | -.125 | .046 | -.056 | -2.751 | .006 |
| | Corruption | -.084 | .020 | -.085 | -4.123 | .000 |
| | Authority | -.117 | .018 | -.121 | -6.405 | .000 |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by Multi-country weighting factor

UGANDA-POLITICAL DECENTRALIZATION

Dependent Variable-Corruption

GET

FILE='D:\OneDrive - american.edu\Documents\Dissertation\DATA\UGANDAFINALINDEXcurrent\UG.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.

REGRESSION

/MISSING PAIRWISE
/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Corruption
/METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence
Authority Approval LGREV Q1_1 Q101_1 Q97_1 SNUEthnicity PartyAgree PolDec.

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|--|-------------------|--------|
| 1 | PolDec, Q101_1, SNUEthnicity, Pfinvolvement, PartyAgree, Authority, Q1_1, FiscalPower, FairTreatment, Participation, Q97_1, Approval, LGREV, Confidence ^c | . | Enter |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by withinwt

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .461 ^a | .213 | .208 | .77617 |

a. Predictors: (Constant), PolDec, Q101_1, SNUEthnicity, Pfinvolvement, PartyAgree, Authority, Q1_1, FiscalPower, FairTreatment, Participation, Q97_1, Approval, LGREV, Confidence

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 361.889 | 14 | 25.849 | 42.908 | .000 ^c |
| | Residual | 1338.621 | 2222 | .602 | | |
| | Total | 1700.511 | 2236 | | | |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by withinwt

c. Predictors: (Constant), PolDec, Q101_1, SNUEthnicity, Pfinvolvement, PartyAgree, Authority, Q1_1, FiscalPower, FairTreatment, Participation, Q97_1, Approval, LGREV, Confidence

Coefficients^{a,b}

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|---------------|-----------------------------|------------|---------------------------|---------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .184 | .111 | | 1.652 | .099 |
| | Pfinvolvement | -.016 | .021 | -.015 | -.778 | .437 |
| | FiscalPower | -.043 | .021 | -.044 | -2.088 | .037 |
| | Participation | .134 | .020 | .138 | 6.619 | .000 |
| | FairTreatment | -.004 | .021 | -.004 | -.190 | .849 |
| | Confidence | -.287 | .023 | -.314 | -12.766 | .000 |
| | Authority | .171 | .020 | .182 | 8.723 | .000 |
| | Approval | .007 | .022 | .007 | .317 | .751 |
| | LGREV | -.026 | .011 | -.053 | -2.353 | .019 |
| | Q1_1 | -.001 | .001 | -.012 | -.608 | .543 |
| | Q101_1 | -.040 | .035 | -.023 | -1.134 | .257 |
| | Q97_1 | -.006 | .010 | -.013 | -.607 | .544 |
| | SNUEthnicity | .001 | .021 | .001 | .031 | .975 |
| | PartyAgree | -.092 | .036 | -.051 | -2.567 | .010 |
| | PolDec | .047 | .024 | .043 | 1.932 | .053 |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by withinwt

Dependent Variable-Authority

```

REGRESSION
  /MISSING PAIRWISE
  /REGWGT=withinwt
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Authority
  /METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence Approval
  LGREV Q1_1 Q101_1 Q97_1 SNUethnicity PartyAgree PolDec Corruption.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|--|-------------------|--------|
| 1 | Corruption, PolDec, SNUethnicity, Pfinvolvement, Q1_1, PartyAgree, Q101_1, FiscalPower, FairTreatment, Participation, Q97_1, Approval, LGREV, Confidence ^c | | Enter |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by withinwt

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .460 ^a | .212 | .207 | .82704 |

a. Predictors: (Constant), Corruption, PolDec, SNUethnicity, Pfinvolvement, Q1_1, PartyAgree, Q101_1, FiscalPower, FairTreatment, Participation, Q97_1, Approval, LGREV, Confidence

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|------|-------------|--------|-------------------|
| 1 Regression | 408.457 | 14 | 29.175 | 42.655 | .000 ^c |
| Residual | 1519.819 | 2222 | .684 | | |
| Total | 1928.276 | 2236 | | | |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by withinwt

c. Predictors: (Constant), Corruption, PolDec, SNUEthnicity, Pfinvolvement, Q1_1, PartyAgree, Q101_1, FiscalPower, FairTreatment, Participation, Q97_1, Approval, LGREV, Confidence

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---------------|-----------------------------|------------|---------------------------|---------|------|
| | B | Std. Error | Beta | | |
| 1 (Constant) | .322 | .118 | | 2.725 | .006 |
| Pfinvolvement | .002 | .022 | .002 | .103 | .918 |
| FiscalPower | .000 | .022 | .000 | .016 | .987 |
| Participation | .064 | .022 | .062 | 2.948 | .003 |
| FairTreatment | .091 | .023 | .088 | 4.012 | .000 |
| Confidence | -.037 | .025 | -.038 | -1.492 | .136 |
| Approval | -.266 | .023 | -.265 | -11.622 | .000 |
| LGREV | -.065 | .012 | -.126 | -5.649 | .000 |
| Q1_1 | .000 | .001 | .006 | .290 | .772 |
| Q101_1 | -.036 | .038 | -.020 | -.966 | .334 |
| Q97_1 | -.037 | .010 | -.078 | -3.613 | .000 |
| SNUEthnicity | -.057 | .023 | -.048 | -2.510 | .012 |
| PartyAgree | -.006 | .038 | -.003 | -.146 | .884 |
| PolDec | -.046 | .026 | -.040 | -1.779 | .075 |
| Corruption | .194 | .022 | .182 | 8.723 | .000 |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by withinwt

Dependent Variable-Approval

REGRESSION
/MISSING PAIRWISE

```

/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Approval
/METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence LGREV
Q1_1 Q101_1 Q97_1 SNUethnicity PartyAgree PolDec Corruption Authority.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | Authority, Pfinvolvement, Q1_1, SNUethnicity, PartyAgree, PolDec, Q101_1, FiscalPower, FairTreatment, Corruption, Participation, Q97_1, LGREV, Confidence ^c | . | Enter |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by withinwt

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .596 ^a | .355 | .351 | .74539 |

a. Predictors: (Constant), Authority, Pfinvolvement, Q1_1, SNUethnicity, PartyAgree, PolDec, Q101_1, FiscalPower, FairTreatment, Corruption, Participation, Q97_1, LGREV, Confidence

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|-------|----------------|----|-------------|---|------|
|-------|----------------|----|-------------|---|------|

| | | | | | | |
|---|------------|----------|------|--------|--------|-------------------|
| 1 | Regression | 678.363 | 14 | 48.455 | 87.210 | .000 ^c |
| | Residual | 1234.555 | 2222 | .556 | | |
| | Total | 1912.918 | 2236 | | | |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by withinwt

c. Predictors: (Constant), Authority, Pfinvolvement, Q1_1, SNUEthnicity, PartyAgree, PolDec, Q101_1, FiscalPower, FairTreatment, Corruption, Participation, Q97_1, LGREV, Confidence

| Coefficients ^{a,b} | | | | | |
|-----------------------------|-----------------------------|------------|---------------------------|-------|------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| 1 | (Constant) | -.067 | .107 | -.631 | .528 |
| | Pfinvolvement | .062 | .020 | .055 | .002 |
| | FiscalPower | .237 | .019 | .230 | .000 |
| | Participation | .091 | .020 | .088 | .000 |
| | FairTreatment | -.074 | .021 | -.071 | .000 |
| | Confidence | .315 | .021 | .324 | .000 |
| | LGREV | -.036 | .010 | -.070 | .001 |
| | Q1_1 | -.001 | .001 | -.013 | .463 |
| | Q101_1 | -.015 | .034 | -.008 | .655 |
| | Q97_1 | .023 | .009 | .047 | .015 |
| | SNUEthnicity | .034 | .020 | .028 | .101 |
| | PartyAgree | -.059 | .035 | -.031 | .086 |
| | PolDec | .016 | .024 | .014 | .486 |
| | Corruption | .006 | .020 | .006 | .751 |
| | Authority | -.216 | .019 | -.217 | .000 |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by withinwt

SPATIAL & STRENGTH

Dependent Variable-Corruption

```
REGRESSION
/MISSING PAIRWISE
/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
```

```

/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Corruption
/METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence LGREV
Q1_1 Q101_1 Q97_1 SNUethnicity PartyAgree Authority Approval spatial strengthB.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|--|-------------------|--------|
| 1 | strengthB, Q101_1, PartyAgree, Pfinvolvement, spatial, Authority, Q1_1, SNUethnicity, FiscalPower, FairTreatment, Participation, Q97_1, Approval, LGREV, Confidence ^c | | Enter |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by withinwt

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .463 ^a | .215 | .209 | .77551 |

a. Predictors: (Constant), strengthB, Q101_1, PartyAgree, Pfinvolvement, spatial, Authority, Q1_1, SNUethnicity, FiscalPower, FairTreatment, Participation, Q97_1, Approval, LGREV, Confidence

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|----|-------------|--------|-------------------|
| 1 Regression | 364.773 | 15 | 24.318 | 40.435 | .000 ^c |

| | | | | | |
|----------|----------|------|------|--|--|
| Residual | 1335.738 | 2221 | .601 | | |
| Total | 1700.511 | 2236 | | | |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by withinwt

c. Predictors: (Constant), strengthB, Q101_1, PartyAgree, Pfinvolvement, spatial, Authority, Q1_1, SNUEthnicity, FiscalPower, FairTreatment, Participation, Q97_1, Approval, LGREV, Confidence

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|------------|---------------------------|-------|------|
| | B | Std. Error | Beta | | |
| 1 | | | | | |
| | (Constant) | .246 | .117 | 2.108 | .035 |
| | Pfinvolvement | -.018 | .021 | -.017 | .391 |
| | FiscalPower | -.043 | .021 | -.045 | .035 |
| | Participation | .135 | .020 | .139 | .000 |
| | FairTreatment | -.005 | .021 | -.005 | .822 |
| | Confidence | -.290 | .023 | -.317 | .000 |
| | LGREV | -.036 | .012 | -.073 | .003 |
| | Q1_1 | -.001 | .001 | -.011 | .573 |
| | Q101_1 | -.039 | .035 | -.022 | .271 |
| | Q97_1 | -.007 | .010 | -.016 | .461 |
| | SNUEthnicity | .013 | .022 | .012 | .539 |
| | PartyAgree | -.092 | .036 | -.051 | .011 |
| | Authority | .170 | .020 | .181 | .000 |
| | Approval | .007 | .022 | .007 | .753 |
| | spatial | .051 | .020 | .062 | .011 |
| | strengthB | -.098 | .064 | -.030 | .125 |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by withinwt

Dependent Variable-Authority

```
REGRESSION
/MISSING PAIRWISE
/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
```

/DEPENDENT Authority
 /METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence LGREV
 Q1_1 Q101_1 Q97_1 SNUethnicity PartyAgree Approval spatial strengthB Corruption.

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | Corruption, Q1_1, Pfinvolvement, SNUethnicity, LGREV, Q101_1, PartyAgree, FiscalPower, strengthB, FairTreatment, Participation, Q97_1, Approval, spatial, Confidence ^c | | Enter |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by withinwt

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .460 ^a | .211 | .206 | .82752 |

a. Predictors: (Constant), Corruption, Q1_1, Pfinvolvement, SNUethnicity, LGREV, Q101_1, PartyAgree, FiscalPower, strengthB, FairTreatment, Participation, Q97_1, Approval, spatial, Confidence

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 407.367 | 15 | 27.158 | 39.659 | .000 ^c |
| | Residual | 1520.910 | 2221 | .685 | | |

| | | | | | |
|-------|----------|------|--|--|--|
| Total | 1928.276 | 2236 | | | |
|-------|----------|------|--|--|--|

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by withinwt

c. Predictors: (Constant), Corruption, Q1_1, Pfinvolvement, SNUethnicity, LGREV, Q101_1, PartyAgree, FiscalPower, strengthB, FairTreatment, Participation, Q97_1, Approval, spatial, Confidence

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---------------|-----------------------------|------------|---------------------------|---------|------|
| | B | Std. Error | Beta | | |
| 1 (Constant) | .308 | .125 | | 2.472 | .014 |
| Pfinvolvement | .003 | .022 | .002 | .113 | .910 |
| FiscalPower | .003 | .022 | .003 | .156 | .876 |
| Participation | .066 | .022 | .064 | 3.037 | .002 |
| FairTreatment | .089 | .023 | .086 | 3.923 | .000 |
| Confidence | -.037 | .025 | -.038 | -1.483 | .138 |
| LGREV | -.067 | .013 | -.128 | -5.228 | .000 |
| Q1_1 | .000 | .001 | .006 | .291 | .771 |
| Q101_1 | -.037 | .038 | -.020 | -.994 | .320 |
| Q97_1 | -.039 | .010 | -.081 | -3.768 | .000 |
| SNUethnicity | -.064 | .023 | -.054 | -2.756 | .006 |
| PartyAgree | -.007 | .038 | -.003 | -.170 | .865 |
| Approval | -.266 | .023 | -.265 | -11.633 | .000 |
| spatial | -.018 | .021 | -.021 | -.864 | .387 |
| strengthB | .065 | .068 | .019 | .946 | .344 |
| Corruption | .194 | .022 | .182 | 8.715 | .000 |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by withinwt

Dependent Variable-Approval

```

REGRESSION
/MISSING PAIRWISE
/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Approval

```


/METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence LGREV
 Q1_1 Q101_1 Q97_1 SNUEthnicity PartyAgree spatial strengthB Corruption Authority.

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | Authority, Pfinvolvement, Q1_1, SNUEthnicity, PartyAgree, spatial, Q101_1, strengthB, FiscalPower, FairTreatment, Corruption, Participation, Q97_1, Confidence, LGREV ^c | . | Enter |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by withinwt

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .596 ^a | .355 | .350 | .74554 |

a. Predictors: (Constant), Authority, Pfinvolvement, Q1_1, SNUEthnicity, PartyAgree, spatial, Q101_1, strengthB, FiscalPower, FairTreatment, Corruption, Participation, Q97_1, Confidence, LGREV

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|-------|----------------|----|-------------|---|------|
|-------|----------------|----|-------------|---|------|

| | | | | | | |
|---|------------|----------|------|--------|--------|-------------------|
| 1 | Regression | 678.430 | 15 | 45.229 | 81.372 | .000 ^c |
| | Residual | 1234.489 | 2221 | .556 | | |
| | Total | 1912.918 | 2236 | | | |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by withinwt

c. Predictors: (Constant), Authority, Pfinvolvement, Q1_1, SNUEthnicity, PartyAgree, spatial, Q101_1, strengthB, FiscalPower, FairTreatment, Corruption, Participation, Q97_1, Confidence, LGREV

| Coefficients ^{a,b} | | | | | | |
|-----------------------------|-----------------------------|------------|---------------------------|-------|---------|------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | |
| | B | Std. Error | Beta | | | |
| 1 | (Constant) | -.051 | .112 | -.456 | .648 | |
| | Pfinvolvement | .062 | .020 | .054 | 3.072 | .002 |
| | FiscalPower | .235 | .019 | .229 | 12.264 | .000 |
| | Participation | .090 | .020 | .087 | 4.585 | .000 |
| | FairTreatment | -.073 | .021 | -.070 | -3.560 | .000 |
| | Confidence | .315 | .021 | .324 | 14.685 | .000 |
| | LGREV | -.035 | .012 | -.068 | -3.072 | .002 |
| | Q1_1 | -.001 | .001 | -.013 | -.734 | .463 |
| | Q101_1 | -.015 | .034 | -.008 | -.432 | .666 |
| | Q97_1 | .023 | .009 | .049 | 2.522 | .012 |
| | SNUEthnicity | .038 | .021 | .032 | 1.794 | .073 |
| | PartyAgree | -.059 | .035 | -.031 | -1.715 | .086 |
| | spatial | .003 | .019 | .003 | .154 | .878 |
| | strengthB | -.047 | .062 | -.014 | -.769 | .442 |
| | Corruption | .006 | .020 | .006 | .314 | .753 |
| | Authority | -.216 | .019 | -.217 | -11.633 | .000 |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by withinwt

TANZANIA

Dependent Variable- Corruption

REGRESSION
/MISSING PAIRWISE

```

/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Corruption
/METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Confidence Q1_1
Q101_1 Q97_1 LGRev PartyAgree SNUethnicity spatial Approval Authority.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|--|-------------------|--------|
| 1 | Authority, FairTreatment, FiscalPower, SNUethnicity, Q101_1, PartyAgree, spatial, Q97_1, Pfinvolvement, Participation, Approval, Q1_1, Confidence, LGRev ^c | . | Enter |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Within-country weighting factor

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .541 ^a | .293 | .288 | .74918 |

a. Predictors: (Constant), Authority, FairTreatment, FiscalPower, SNUethnicity, Q101_1, PartyAgree, spatial, Q97_1, Pfinvolvement, Participation, Approval, Q1_1, Confidence, LGRev

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|------|-------------|--------|-------------------|
| 1 Regression | 472.884 | 14 | 33.777 | 60.180 | .000 ^c |
| Residual | 1141.068 | 2033 | .561 | | |
| Total | 1613.952 | 2047 | | | |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Within-country weighting factor

c. Predictors: (Constant), Authority, FairTreatment, FiscalPower, SNUEthnicity, Q101_1, PartyAgree, spatial, Q97_1, Pfinvolvement, Participation, Approval, Q1_1, Confidence, LGRev

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---------------|-----------------------------|------------|---------------------------|---------|------|
| | B | Std. Error | Beta | | |
| (Constant) | .110 | .124 | | .883 | .377 |
| Pfinvolvement | .028 | .021 | .026 | 1.290 | .197 |
| FiscalPower | -.040 | .019 | -.040 | -2.055 | .040 |
| Participation | .126 | .020 | .125 | 6.152 | .000 |
| FairTreatment | .186 | .021 | .183 | 9.016 | .000 |
| Confidence | -.255 | .021 | -.271 | -11.939 | .000 |
| Q1_1 | -.003 | .001 | -.041 | -1.985 | .047 |
| Q101_1 | .006 | .035 | .004 | .182 | .856 |
| Q97_1 | .005 | .013 | .007 | .348 | .728 |
| LGRev | -.004 | .004 | -.029 | -.975 | .330 |
| PartyAgree | -.097 | .037 | -.054 | -2.661 | .008 |
| SNUEthnicity | .001 | .023 | .000 | .022 | .983 |
| spatial | .084 | .035 | .070 | 2.382 | .017 |
| Approval | -.146 | .020 | -.157 | -7.205 | .000 |
| Authority | .101 | .018 | .108 | 5.493 | .000 |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Within-country weighting factor

Dependent Variable-Authority

```
REGRESSION
/MISSING PAIRWISE
/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
```

```

/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Authority
/METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Corruption
Confidence Q1_1 Q101_1 Q97_1 LGRev PartyAgree SNUEthnicity spatial Approval.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | Approval, SNUEthnicity, Participation, Q97_1, Q101_1, PartyAgree, FiscalPower, spatial, FairTreatment, Pfinvolvement, Q1_1, Corruption, Confidence, LGRev ^c | | Enter |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Within-country weighting factor

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .328 ^a | .108 | .101 | .90013 |

a. Predictors: (Constant), Approval, SNUEthnicity, Participation, Q97_1, Q101_1, PartyAgree, FiscalPower, spatial, FairTreatment, Pfinvolvement, Q1_1, Corruption, Confidence, LGRev

ANOVA^{a,b}

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|------|-------------|--------|-------------------|
| 1 Regression | 198.569 | 14 | 14.183 | 17.505 | .000 ^c |
| Residual | 1647.220 | 2033 | .810 | | |
| Total | 1845.788 | 2047 | | | |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Within-country weighting factor

c. Predictors: (Constant), Approval, SNUEthnicity, Participation, Q97_1, Q101_1, PartyAgree, FiscalPower, spatial, FairTreatment, Pfinvolvement, Q1_1, Corruption, Confidence, LGRev

Coefficients^{a,b}

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| (Constant) | -.087 | .149 | | -.584 | .559 |
| Pfinvolvement | -.178 | .025 | -.158 | -6.998 | .000 |
| FiscalPower | .058 | .023 | .055 | 2.479 | .013 |
| Participation | .065 | .025 | .060 | 2.614 | .009 |
| FairTreatment | -.085 | .025 | -.078 | -3.371 | .001 |
| Corruption | .145 | .026 | .136 | 5.493 | .000 |
| Confidence | .012 | .027 | .012 | .469 | .639 |
| 1 Q1_1 | -.001 | .002 | -.011 | -.491 | .623 |
| Q101_1 | -.037 | .042 | -.020 | -.888 | .375 |
| Q97_1 | .008 | .016 | .012 | .516 | .606 |
| LGRev | .014 | .005 | .094 | 2.820 | .005 |
| PartyAgree | -.051 | .044 | -.027 | -1.160 | .246 |
| SNUEthnicity | .025 | .028 | .020 | .904 | .366 |
| spatial | -.025 | .042 | -.020 | -.589 | .556 |
| Approval | -.200 | .024 | -.200 | -8.215 | .000 |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Within-country weighting factor

Dependent Variable- Approval

GET

```

FILE='C:\Users\chase\OneDrive -
american.edu\Documents\Dissertation\DATA\TANZANIAFINALINDEXcurrent\TZFINAL.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
REGRESSION
  /MISSING PAIRWISE
  /REGWGT=withinwt
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Approval
  /METHOD=ENTER Pfinvolvement FiscalPower Participation FairTreatment Corruption
Confidence Authority Q1_1 Q101_1 Q97_1 LGRev PartyAgree SNUEthnicity spatial.

```

Regression

| Variables Entered/Removed ^{a,b} | | | |
|--|---|-------------------|--------|
| Model | Variables Entered | Variables Removed | Method |
| 1 | spatial, Q101_1, Authority, FairTreatment, FiscalPower, PartyAgree, SNUEthnicity, Q97_1, Pfinvolvement, Participation, Q1_1, Corruption, Confidence, LGRev ^c | | Enter |

- a. Dependent Variable: Approval
- b. Weighted Least Squares Regression - Weighted by Within-country weighting factor
- c. All requested variables entered.

| Model Summary | | | | |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .531 ^a | .282 | .277 | .80800 |

a. Predictors: (Constant), spatial, Q101_1, Authority, FairTreatment, FiscalPower, PartyAgree, SNUEthnicity, Q97_1, Pfinvolvement, Participation, Q1_1, Corruption, Confidence, LGRev

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 520.452 | 14 | 37.175 | 56.942 | .000 ^c |
| | Residual | 1327.259 | 2033 | .653 | | |
| | Total | 1847.711 | 2047 | | | |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by Within-country weighting factor

c. Predictors: (Constant), spatial, Q101_1, Authority, FairTreatment, FiscalPower, PartyAgree, SNUEthnicity, Q97_1, Pfinvolvement, Participation, Q1_1, Corruption, Confidence, LGRev

Coefficients^{a,b}

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|---------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .016 | .134 | | .119 | .906 |
| | Pfinvolvement | .121 | .023 | .107 | 5.277 | .000 |
| | FiscalPower | .155 | .021 | .146 | 7.486 | .000 |
| | Participation | .023 | .022 | .022 | 1.049 | .294 |
| | FairTreatment | -.043 | .023 | -.039 | -1.887 | .059 |
| | Corruption | -.170 | .024 | -.159 | -7.205 | .000 |
| | Confidence | .318 | .023 | .316 | 13.996 | .000 |
| | Authority | -.161 | .020 | -.161 | -8.215 | .000 |
| | Q1_1 | .000 | .001 | .004 | .187 | .852 |
| | Q101_1 | .032 | .038 | .017 | .843 | .399 |
| | Q97_1 | -.002 | .015 | -.003 | -.133 | .894 |
| | LGRev | .003 | .004 | .022 | .738 | .461 |
| | PartyAgree | -.064 | .040 | -.033 | -1.610 | .108 |
| | SNUEthnicity | -.025 | .025 | -.019 | -.977 | .328 |
| | spatial | .043 | .038 | .034 | 1.129 | .259 |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by Within-country weighting factor

GHANA

Dependent Variable-Corruption

REGRESSION

```

/MISSING PAIRWISE
/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Corruption
/METHOD=ENTER Pfinvolvement FiscalPower FairTreatment Confidence Authority Approval
Q1_1 Q101_1 Q97_1 LGRev SNUEthnicity PartyAgree spatial Participation.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | Participation, FiscalPower, FairTreatment, Q97_1, Pfinvolvement, PartyAgree, SNUEthnicity, Authority, Q101_1, Q1_1, spatial, Confidence, Approval, LGRev ^c | | Enter |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Within country weighting variable

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---|----------|-------------------|----------------------------|
|-------|---|----------|-------------------|----------------------------|

| | | | | |
|---|-------------------|------|------|--------|
| 1 | .354 ^a | .125 | .120 | .86157 |
|---|-------------------|------|------|--------|

a. Predictors: (Constant), Participation, FiscalPower, FairTreatment, Q97_1, Pfinvolvement, PartyAgree, SNUEthnicity, Authority, Q101_1, Q1_1, spatial, Confidence, Approval, LGRev

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 252.252 | 14 | 18.018 | 24.273 | .000 ^c |
| | Residual | 1762.214 | 2374 | .742 | | |
| | Total | 2014.466 | 2388 | | | |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Within country weighting variable

c. Predictors: (Constant), Participation, FiscalPower, FairTreatment, Q97_1, Pfinvolvement, PartyAgree, SNUEthnicity, Authority, Q101_1, Q1_1, spatial, Confidence, Approval, LGRev

Coefficients^{a,b}

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|---------------|-----------------------------|------------|---------------------------|---------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .073 | .114 | | .640 | .522 |
| | Pfinvolvement | -.046 | .021 | -.044 | -2.227 | .026 |
| | FiscalPower | -.052 | .027 | -.052 | -1.905 | .057 |
| | FairTreatment | .055 | .020 | .053 | 2.661 | .008 |
| | Confidence | -.254 | .023 | -.262 | -10.949 | .000 |
| | Authority | .133 | .020 | .137 | 6.765 | .000 |
| | Approval | -.004 | .026 | -.004 | -.153 | .879 |
| | Q1_1 | .000 | .001 | -.008 | -.363 | .716 |
| | Q101_1 | -.055 | .038 | -.030 | -1.477 | .140 |
| | Q97_1 | .011 | .010 | .025 | 1.119 | .263 |
| | LGRev | -.001 | .002 | -.026 | -.829 | .407 |
| | SNUEthnicity | .053 | .025 | .043 | 2.143 | .032 |
| | PartyAgree | -.102 | .038 | -.053 | -2.675 | .008 |
| | spatial | -.025 | .024 | -.032 | -1.040 | .299 |
| | Participation | .047 | .021 | .047 | 2.251 | .024 |

a. Dependent Variable: Corruption

b. Weighted Least Squares Regression - Weighted by Within country weighting variable

Dependent Variable-Authority

REGRESSION

```

/MISSING PAIRWISE
/REGWGT=withinwt
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Authority
/METHOD=ENTER Pfinvolvement FiscalPower FairTreatment Confidence Approval Q1_1 Q101_1
Q97_1 LGRev SNUEthnicity PartyAgree spatial Participation Corruption.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | Corruption, spatial, Q101_1, Pfinvolvement, PartyAgree, FairTreatment, Q1_1, Approval, SNUEthnicity, Participation, Q97_1, Confidence, FiscalPower, LGRev ^c | . | Enter |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Within
country weighting variable

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|-------------------------------|
| 1 | .344 ^a | .118 | .113 | .88790 |

a. Predictors: (Constant), Corruption, spatial, Q101_1, Pfinvolvement, PartyAgree, FairTreatment, Q1_1, Approval, SNUEthnicity, Participation, Q97_1, Confidence, FiscalPower, LGRev

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|--------|-------------------|
| 1 | Regression | 251.276 | 14 | 17.948 | 22.766 | .000 ^c |
| | Residual | 1871.602 | 2374 | .788 | | |
| | Total | 2122.878 | 2388 | | | |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Within country weighting variable

c. Predictors: (Constant), Corruption, spatial, Q101_1, Pfinvolvement, PartyAgree, FairTreatment, Q1_1, Approval, SNUEthnicity, Participation, Q97_1, Confidence, FiscalPower, LGRev

Coefficients^{a,b}

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|---------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .334 | .117 | | 2.846 | .004 |
| | Pfinvolvement | -.146 | .021 | -.137 | -6.938 | .000 |
| | FiscalPower | .133 | .028 | .129 | 4.780 | .000 |
| | FairTreatment | .164 | .021 | .155 | 7.845 | .000 |
| | Confidence | .017 | .025 | .017 | .675 | .500 |
| | Approval | -.074 | .027 | -.076 | -2.758 | .006 |
| | Q1_1 | -.005 | .001 | -.082 | -3.960 | .000 |
| | Q101_1 | .025 | .039 | .013 | .637 | .524 |
| | Q97_1 | .017 | .011 | .035 | 1.575 | .115 |
| | LGRev | -.001 | .002 | -.019 | -.599 | .550 |
| | SNUEthnicity | -.050 | .025 | -.040 | -1.991 | .047 |
| | PartyAgree | -.074 | .039 | -.038 | -1.893 | .059 |
| | spatial | .075 | .025 | .096 | 3.077 | .002 |
| | Participation | .072 | .021 | .070 | 3.365 | .001 |
| | Corruption | .142 | .021 | .138 | 6.765 | .000 |

a. Dependent Variable: Authority

b. Weighted Least Squares Regression - Weighted by Within country weighting variable

Dependent Variable-Approval

```

REGRESSION
  /MISSING PAIRWISE
  /REGWGT=withinwt
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Approval
  /METHOD=ENTER Pfinvolvement FiscalPower FairTreatment Confidence Q1_1 Q101_1 Q97_1
  LGRev SNUethnicity PartyAgree spatial Participation Corruption Authority.

```

Regression

Variables Entered/Removed^{a,b}

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | Authority, Q101_1, Confidence, PartyAgree, SNUethnicity, Pfinvolvement, Q1_1, FairTreatment, LGRev, Corruption, Participation, Q97_1, FiscalPower, spatial ^c | . | Enter |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by Within country weighting variable

c. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .720 ^a | .519 | .516 | .68239 |

a. Predictors: (Constant), Authority, Q101_1, Confidence, PartyAgree, SNUethnicity, Pfinvolvement, Q1_1, FairTreatment, LGRev, Corruption, Participation, Q97_1, FiscalPower, spatial

ANOVA^{a,b}

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|------|-------------|---------|-------------------|
| 1 | Regression | 1190.623 | 14 | 85.044 | 182.635 | .000 ^c |
| | Residual | 1105.457 | 2374 | .466 | | |
| | Total | 2296.080 | 2388 | | | |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by Within country weighting variable

c. Predictors: (Constant), Authority, Q101_1, Confidence, PartyAgree, SNUEthnicity, Pfinvolvement, Q1_1, FairTreatment, LGRev, Corruption, Participation, Q97_1, FiscalPower, spatial

Coefficients^{a,b}

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|---------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.176 | .090 | | -1.948 | .052 |
| | Pfinvolvement | .024 | .016 | .022 | 1.473 | .141 |
| | FiscalPower | .585 | .018 | .546 | 32.757 | .000 |
| | FairTreatment | .015 | .016 | .014 | .924 | .356 |
| | Confidence | .278 | .018 | .268 | 15.473 | .000 |
| | Q1_1 | .000 | .001 | -.006 | -.399 | .690 |
| | Q101_1 | .091 | .030 | .047 | 3.070 | .002 |
| | Q97_1 | .043 | .008 | .088 | 5.350 | .000 |
| | LGRev | -.001 | .001 | -.011 | -.487 | .626 |
| | SNUEthnicity | .008 | .020 | .006 | .395 | .693 |
| | PartyAgree | -.110 | .030 | -.053 | -3.641 | .000 |
| | spatial | -.012 | .019 | -.014 | -.611 | .541 |
| | Participation | .025 | .017 | .024 | 1.522 | .128 |
| | Corruption | -.002 | .016 | -.002 | -.153 | .879 |
| | Authority | -.043 | .016 | -.042 | -2.758 | .006 |

a. Dependent Variable: Approval

b. Weighted Least Squares Regression - Weighted by Within country weighting variable

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