# HONORS CAPSTONE RESEARCH PAPER THE POLITICAL DECISION-MAKING PROCESS IN BRAZIL: ETHANOL AS A CASE STUDY

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Ethanol has a long history. Having been around Europe since the midnineteenth century, ethanol-fueled engines are no novelty. In 1908, Henry Ford's famous Model T already represented what we today call a flexible-fuel car, able to run on gasoline, ethanol or a mixture of both. For several reasons this newly-developed ethanol industry fell apart before it took off in the United States, giving place to the politically stronger oil industry that dominated the automobile fuel market throughout the following decades. The search for renewable fuels among the international community has only been reawakened in recent years, driven by environmental concerns as well as the need to find an alternative to the economically volatile gasoline, on which most countries currently depend.

One of Brazil's most notable technological contributions to this search has been the development of technologies that allow massive and affordable production of ethanol fuel produced out of sugarcane. Through extensive research and development (R&D) programs, Brazil has singled out high-yielding sugarcane crops, developed efficient ethanol-operated and flexible-fuel engines, and generated technologies to generate electricity from the very waste of sugarcane production. These remarkable technological innovations have helped the country achieve self-sufficiency in energy production, favorable standing within the international community, and independency from foreign oil imports. The development of ethanol and the investments associated with it has also allowed the Brazilian sugarcane industry to grow at an extraordinary pace, becoming one of the largest sugar industries in the world.

Ethanol technology was promoted in Brazil mostly through government-run projects. Renowned among these is the National Alcohol Program, or PRO-ÁLCOOL,

implemented in 1975, and known as the most important biomass energy program in the world.<sup>6</sup> Nevertheless, government efforts to promote Brazil's cane-derived alcohol are much older than the PRO-ÁLCOOL itself, dating back to the early decades of the twentieth century. Policies to aid the Brazilian sugar industry through ethanol promotion date back to periods before the 1930s, and have evolved quite tremendously ever since. The largest policies have been implemented in dictatorial periods, but most of them remained in operation through democratic ones. In fact, experts state that the history of sugarcane and the history of Brazil are intertwined.<sup>7</sup> To what extent this is true is unspecified, and remains an important topic for examination as connections between the evolution of the sugar industry and of the country itself as a democracy can offer valuable insights for present-day political analysis.

Thus, this essay will examine the progression of ethanol development in Brazil and its relation to the country's difficult and lengthy process of democratization during the twentieth century. The study finds that among all the interests that have influenced the Brazilian government's decision-making since the 1920s, two specific forces have remained predominantly influential on the Brazilian political apparatus through the entire ethanol promotion era. The first one is the powerful influence of the agribusiness elites, represented in this analysis by the sugarcane business, one of the most influential industries in the country. These elites have diligently encouraged and shaped favorable governmental policies to their benefit through all periods analyzed. The second prevailing force relates to development-oriented efforts by political leaders to establish Brazil as a rising economic power within the global arena. These efforts have included, depending on

the occasion examined, the determination to avoid trade balance damages from fluctuations in foreign oil prices, or the will to promote the country's image as a key player in the worldwide effort to pursue clean technologies. The interests of the agricultural elites and development-minded governments are in many ways convergent, and by examining them through the lens of the sugarcane/ethanol lobby one can establish a parallel to every other major lobbying power in Brazil, such as the coffee or oil industry. Throughout this paper, one can witness how these major forces have kept their influence above every other political entity in the country, and allowed very little opening for other forms of participation.

In the first section of the paper I review what scholars say about the political apparatus that has prevailed in Brazil over most of the twentieth century, despite changes in governments and presidents. Scholarly knowledge suggests that throughout the process of democratization – and re-democratization – of Brazil, fundamental issues with the judicial branch of government, the system of state participation, representation of civil society, and even the presidential system itself, have contributed to the country being a flawed democracy, even under non-oppressive governments. I identify these problems and classify them as "democracy gaps:" demos-constraining factors that have hindered the country from achieving what would be considered "ideal" democratic popular participation. These built-in democratic constraints have survived from less democratic periods in the country's history, and have contributed to make the Brazilian political process undemocratic and elite-based.

The remainder of the study consists in a descriptive overview of the major political episodes in the history of Brazil through the lens of the sugarcane industry,

emphasizing the state policies that affected it during the 20<sup>th</sup> century. In the course of this analysis one can see how the level of governmental involvement with the sugarcane industry grew with each period, and also how the most wide-ranging programs were implemented during periods of highly restricted democratic participation. I explore the connection between the "democracy gaps" in each period and the environment that allowed the Brazilian agribusiness and political authorities to establish a mutually dependent relationship throughout the several decades analyzed, out of which PRO-ÁLCOOL and numerous other ethanol-promotion policies originated. This is not meant to be an exhaustive and overly detailed analysis. It is instead a descriptive historical overview, and omits more than a few details about both the ethanol industry's and the Brazilian government's development that are not deemed crucial to the objective of the study.

#### THE BRAZILIAN "POLITICAL MACHINE"

Each time when the outer appearances of the system changed, in substance everything remained the same. We had developmentism with Kubitschek, national populism with Goulart, the authoritarianism of the military, the redemocratization—but everything stayed in place.8

- Arnaldo Jabor, Brazilian screenwriter, journalist and political critic

In order to study the evolution of the decision-making process in Brazil, one must revise the ample literature about the Brazilian political system and its particularities. I dare not participate in the debate over diverging definitions of democracy and how the Brazilian case fits into each of them. Instead, I examine a number of views that relate to the Brazilian political machine and apply them to the case of PRO-ÁLCOOL and similar ethanol policies throughout the twentieth century. Scholars offer fairly consistent accounts that the democratic structures in Brazil contain several fundamental flaws. These flaws have been prevalent throughout the Brazilian political history, despite the many changes in government structure. In this section some of these accounts are examined.

In the attempt to classify Brazil and the forces that have acted in the country through its extensive and bumpy process of democratization, academics have used expressions ranging from "oligarchical democracy" to "state corporativism," from "decentralized federalism" to "bureaucratic authoritarianism," among many others. What these classifications have in common is that they all recognize that political decision-making in Brazil is very much connected to corporate interests, and that there are fundamental flaws in the country's political structure with regards to state representation, judicial process, and control by the corporate elites.

While conducing an ethnographic research on the role of violence in Brazilian society, Teresa Caldeira and James Holston from the University of California explored the theory that, where political democracy does not necessarily generate a democratic rule of law and democratic institutions, the process of democracy in Brazil is a disjunctive one. In order to analyze Brazil as a democracy, one must understand that there are social and cultural changes that must take place for a country to be a full democracy. In other words, having a democratic political system might be a necessary condition to establish a democracy, but is not a sufficient one. I intend to briefly examine in what ways Brazilian democracy is disjunctive, as it applies to state-industry relations. This is not to say that Brazilian democracy is unstable or at the risk of being once again overthrown. On the contrary, the democratic system seems very well established in Brazil, and is free of violent political antagonism and guerilla factions like other Latin American countries. 10 However, the very way in which democracy was achieved – through a controlled process in which elected officials were only granted partial power by the military – has undermined confidence in these authorities, demoralizing the idea of political opposition and civil society in Brazil.<sup>11</sup>

Some scholars suggest that democracy in Brazil might be hindered by its own presidential system, which reflects authoritarian values of the past. Renowned Brazilian historian Leslie Bethell notes that in the Brazilian system, no matter how politically weak a president's term in office might be, it is very difficult to remove presidents from office before the next elections except by extreme measures such as suicide, military coups and impeachment, as had happened in 1954 with Getúlio Vargas, 1964 with João Goulart and in 1992 with Fernando Collor, respectively. 12

This view receives the contribution of scholar Albert Stepan, who points to the extreme overrepresentation that small, low-population states have in Congress due to the unique "floor and ceiling" decision rule that doesn't allow any state to have less than eight or more than seventy representatives in the Lower Chamber. With the exceptionally unequal population distribution over Brazilian territory, this represents serious flaw in political representation. Another undemocratic, or "demos-constraining" factor in Brazilian government, as Stepan puts it, is the absence of crucial principles of judicial review in the Brazilian Supreme Court like stare decisis, writ of certiori, and erga omnes laws. 14

Brazilian sociologist Elisa Reis provides an interesting take on the drivers of the political machine of Brazil. She explores the notion of *state corporativism* as a main pattern of action of the Brazilian political authority starting in the 1930 Revolution with Getúlio Vargas, which was characterized by the prominence of social rights over political and civil ones and by a paternalistic form of state control justified by nationalism.<sup>15</sup> To speak for specific interests was considered illegitimate under this holistic view of society. This nationalism, tied with statism and developmentalism (beliefs that the way to social and economic development is based on state planning) would compound the main modernization ideology in Brazil from the 1930s to 1970s, even after President Vargas was overthrown. 16 Thus, the modernization process in Brazil would be driven by a more similar ideology to a German rather than a British model, as the government takes the leading role in promoting industrial and economic development, and the nationalistic state represents an "organic" collective individual as opposed to a collection of individuals (which is a more typical representation of liberal-democratic orders). <sup>17</sup> I

will argue that one can see this process remained in force even after the 1970s, despite an apparent change in discourse.

Another concept introduced to study military-ruled states like Brazil during the dictatorship era was *bureaucratic authoritarianism*, coined by Guillermo O'Donnell in 1974. This model sought to explain the political situation of authoritarian states ruled by the military as an institution, as opposed to individual military leaders. <sup>18</sup> The model was used to characterize several countries in Latin America that underwent dictatorships such as Argentina, Uruguay and Chile. Yet, Brazil in the mid and late 1970s was considered the country that most accurately fit the bureaucratic authoritarian model proposed by O'Donnell, since the military regime had sufficient longevity and success in economic growth to be characterized as bureaucratic-authoritarian. <sup>19</sup> In the Brazilian authoritarian state, the decision-making process was essentially a technocratic one, and involved wide-ranging economic and political reforms aimed at industrialization and growth, which on the other hand deepened social inequalities. <sup>20</sup>

Markedly throughout the democratization process in Brazil, the feature that repeatedly stands out as the most critical democracy gap is inequality. Severe barriers divide the urban and rural, formal and informal workers. Vertical integration in industries and massive income concentration in cities make it nearly unfeasible for the lower classes to organize in any meaningful way and challenge the status quo.<sup>21</sup> Whereas before democratic periods illiterates were not allowed to vote, the persistence of the extreme poverty and ignorance among the masses makes the later achievement of universal suffrage little more than an adornment, as it makes them vulnerable to all kinds of machinations and political manipulation

from patronage-wielding politicians.<sup>22</sup> These and other factors have limited the democratic character of the Brazilian state through history, and have helped maintain the interests of developmentalist governments and industrial elites aligned and at the helm of decision-making in the country.

#### THE STORY OF ETHANOL IN BRAZIL

In Brazil, the process of ethanol promotion happened under the crucial guidance of the national government. Through several policies of encouragement, the Brazilian political authority has made heavy investments in the development of technology to make sugarcane ethanol an affordable substitute for gasoline. In order to expose the powers behind the decision-making process in the Brazilian government I will examine the sugarcane ethanol-related advancements and policies in each period, and proceed to note the political environment in which these efforts happened.

## THE ORIGINS OF THE ETHANOL IN BRAZIL (BEFORE 1930)

Brazil has extensive experience with sugar. Introduced in 1503 right after the arrival of the Portuguese, sugarcane was the first commercial crop cultivated by the Portuguese crown. In time, sugar became a substantial part of Brazilian agriculture and exports due to ideal soil and climate conditions for planting.<sup>23</sup> In the nineteenth century, however, the industry suffered intense fluctuations due to World War I and competition by European beet sugar. The war devastated European beet production, and with restricted supply, sugar prices rose from 99 to 400£ a sack. This had a major effect on Brazilian sugar production, which nearly doubled in the war period (from six million sacks of sugar in the harvest of 1913/14 to more than 11.6 million in 1919/1920).<sup>24</sup> It should be noted that at this point the Brazilian sugar industry already had a strong oligopolistic character, both in distribution and in production.<sup>25</sup> However, after the war ended and prices went back down, the

industry found itself with a major surplus of sugarcane, and too little demand to compensate for it. Meanwhile, the country was experiencing difficulty in paying for oil importation.<sup>26</sup>

This combination of circumstances prompted the industry leaders to lobby the government to consider the production of ethanol as a solution to both the oil problem and the sugar production surplus.<sup>27</sup> By adopting an alternative fuel, the country could alleviate its trade balance with oil-exporting countries, and at the same time find a use for all the surplus sugar produced by the industry. 28 The efforts succeeded, and led the Brazilian Ministry of Agriculture, Trade and Industry (MAIC) to create the Experimental Station of Fuels and Minerals (EECM) in 1921, which conducted feasibility tests of ethanol as a fuel, either in a blend with gasoline or on its own.<sup>29</sup> This was the first state-run body created to support the sugar industry as a lobby power. It was also the beginning of the long cycle of state policies geared towards the incentive and development of ethanol as an affordable fuel, many of which are still active to this day. The EECM conducted experiments that had as an aim gathering enough data to justify and encourage future ethanol-directed policy creation. Investment of public funds in ethanol research at this point was an attractive option for the government not only because it accommodated the interests of the already-powerful sugar oligarchy, but also due to the possibility that the affordable production of ethanol could help stabilize the balance of payments for all future interactions with foreign oil.<sup>30</sup> Although the creation of the EECM happened before the military government, it was still a technocratic decision "from above" – a state decision with no popular input, heavily influenced by the agricultural lobby.

#### **DECISIONS** in the MAKING

The political period in which these events happened was known as the *República Velha* (Old Republic, also known as First Republic), which lasted until 1930. At the time there was still no military participation in government and elections were regularly held, but voting rights were far from universal. In fact, elections have been held in Brazil ever since the country's independence, but they were seldom honest, had very limited suffrage, and were mostly not for positions of high political power.<sup>31</sup> These democracy gaps characterized Brazil as an "oligarchical democracy," where the process of decision-making was controlled by the elites, despite the democratic status of the political system. What differentiated this period from other phases in the Brazilian political history was that at this point

there was still no significant project of national development. What really guided the country's politics in this period was the so-called coffee-and-cream policy (*Política do café-com-leite*), an alliance between the two dominating industrial oligarchies at the time: the coffee industry, located in Sāo Paulo, and the dairy industry, in Minas Gerais.<sup>32</sup> The pact between these two giants



Figure 1: By using the "bridled vote" and forcing ignorant workers to support certain candidates, the barons of the coffee and dairy industries in Brazil effectively controlled the political process in Brazil

was nothing less than an agreement over how the country would be ruled. The way by which these oligarchies controlled the political process became known as *coronelismo*, or *rule of colonels*.

"Colonels" were the nicknames given to the large Brazilian coffee and dairy barons in the 1920s, who owned extensive lands and employed thousands of workers. The poor and uneducated laborers would be taken to the poll booth and given "incentives" to vote, at times involving a bribe in the form of food or a pair of shoes, and in other instances involving coercion. The latter method received the name voto de cabresto ("bridled vote").33 These measures were facilitated by the fact that most of these workers were illiterate and voting was not secret. Thus, the "colonels" could promise a political candidate a large number of votes in exchange for political favors once they were elected. It is possible to see how at this stage Brazilian politics are already controlled by agricultural powers, although not yet by a development-oriented national plan, as would be the case in later phases. By putting preferred high-ranking officials in power and taking advantage of the wideranging authority that local governments could exercise over the country at the time, these powerful barons controlled the political direction the country was taking.34

#### SUMMARY

The period before 1930 was characterized by the creation of the first governmental body of support for ethanol development, the EECM. The decision to create this body was heavily influenced by lobbying by the sugarcane industry, already an oligarchy of significant political clout at this point. The industry needed

to account for the surplus of sugar produced during World War I, and the government saw in ethanol development an opportunity to alleviate the trade balance as well as the country's dependency on petrol, which at this point was mostly acquired through importation.

The amount of influence the sugarcane elites exerted on the government can be understood by analyzing how the Brazilian political system worked in this era: rural elites, also known as colonels, controlled political affairs in Brazil by supporting their favorite candidates and using "bridled votes" to put them in power. These political favors were returned by the political elites, who conducted policy in a way that favored the powerful landowners and consolidated their power. Sugarcane growers were not as politically powerful as the coffee and dairy producers at the time, but as the creation of the EECM demonstrates, their influence was still significant.

Table 2: <i>CORONELISMO</i> PERIOD (BEFORE 1930) - SIMPLIFIED OVERVIEW				
Relevant Democracy Gaps	Dishonest elections, limited suffrage	Rul	e of Colonels	Bridled Vote
Influential Political Forces	Agribusiness Oligarchies (Coffee and Dairy farmers)			
Status of Ethanol Industry	Surplus due to beet sugar prices		EECM: Proof of high influence in Gov't by the sugar industry	

# THE GETÚLIO VARGAS ERA AND THE IAA (1930-1945)\*

The economic depression of the 1930s caused a sudden plummet of coffee prices. Suffering from the lack of demand, the coffee oligarchies of São Paulo underwent several economic losses and lost much of their political clout. The rise of Getúlio Vargas through a military coup was made possible under these circumstances. After Vargas took power, it did not take long for the São Paulo coffee barons to rise against him in an attempt to recover their lost power, but they were swiftly crushed in what was called the Constitutionalist Revolution of 1932. This oligarchy-government clash might seem like an indicator that the interests of rural elites were no longer represented in government at this point, but such notion could not be further from the truth. Vargas enjoyed the support of several other agricultural elites, including the dairy colonels from Minas Gerais, formerly allied with the coffee oligarchies during the "coffee-and-cream" era. In this sense, any political conflicts in the 1930s were mere struggles among elites. São

Also opposed to the coffee barons and in support of Vargas were the Brazilian sugarcane elites, especially the ones from the Center-South, the largest and most modern of the industry.<sup>37</sup> These elites knew they could benefit greatly from governmental assistance as they had in the past. Furthermore, the years of research at the EECM had been successful in providing evidence that further state assistance to the industry would be beneficial for ethanol development.<sup>38</sup> Under the favorable

<sup>\*</sup> This period was comprised of a "Provisory Government" installed by the military, as well as by a short period of Constitutional Government enacted by Vargas himself, who is elected for the term of 1934-1938. In 1937 he declares the New State and rises as a dictator. For the purposes of this paper, I call "The Vargas Era" the period between 1930-1945 in which Getúlio Vargas rules the country for the first time, between the end of the Old Republic and the "democratic" era in which he remains in power.

rule of Vargas, this assistance did not limit itself to mere subsidies: among other policy actions, he established more commissions to plan and research ethanol technologies as well as to construct distilling plants for the sugar industry, and created a mandate to blend at least 5 percent of ethanol into all imported gasoline sold in the country in 1931.<sup>39</sup> It should be noted that many of these policies still exist today, as the Brazilian government strives to promote ethanol as the clean alternative to petrol gasoline in the international market through R&D research, while simultaneously controlling demand at home by requiring alcohol to be sold at every gas station.<sup>40</sup>

During the first years of his dictatorship, Vargas created the Institute of Sugar and Alcohol (IAA). This establishment would become one of the most important governmental arms of support for the sugarcane agribusiness. The IAA funded several ethanol-promoting projects, bought all surplus production from the sugarcane industry, and continued the creation of new distilling plants. The institute's preferential activities towards the already-oligopolistic sugarcane business ended up inducing a vertical integration of the industry, concentrating its activity around the mills. This caused poorer farmers who still produced in a semifeudal model to progressively exit the industry, consolidating sugarcane market domination by the large landowners.

Despite the efforts of the EECM in developing ethanol technology, the costs of ethanol production were still prohibitive. Gasoline, at the time scarce, was still 7 to 10 times cheaper to manufacture than ethanol. Thus, replacing even 15% of the gasoline with ethanol was so uneconomical that such act could only be justified "by considerations of national and social character."<sup>43</sup> Indeed, Vargas's unconcealed

authoritarianism left little room for doubt that besides the interests of the agricultural oligarchy, these considerations were what the Brazilian alcohol program was based upon.

#### **DECISIONS** in the MAKING

Under Vargas's first rule, the influence of the agricultural elite was no longer the only force behind the decision-making process in Brazil. Centralizing power in the federal government, Getúlio Vargas designed a national plan to advance the Brazilian economy, based on a *developmentalist* approach.<sup>44</sup> It was the first time a paternalistic plan of development took place as one of the main driving forces behind the decision-making process in the country. Although the decisions made in Vargas's government were inevitably favorable to the political alliance that supported him, one of the central themes in Vargas's plan of government was the notion of industrial and economic development promotion through state-run economic reforms. Thus, his government model was considered a *state-corporativist* one.<sup>45</sup> To illustrate it, I translate one of his quotes:

"By closely examining the most predominant factor in social evolution I believe not to err by stating that the main cause of failure in all economic systems that tried to establish the balance of productive forces, is the allowing of free activity in the performance of natural energies, i.e., the lack of organization of capital and work, two dynamic elements prevalent in the phenomenon of production, whose activity convenes, above all, regulation and discipline."

As the quote suggests, Vargas believed that the State had a very important role to play in the economy. Despite being an anti-communist he was also a critic of the laissez-faire system. The matrix of his government was characterized by strong state presence in the economy and an anti-liberal stance.<sup>47</sup> He famously took several

steps to increasingly centralize his regime and empower the federal government while taking away powers from the states.<sup>48</sup> The fact that capitalism had suffered a major crisis in the 1930s also led many scholars to believe that Vargas's government ideas were based on Keynesian economics, although Keynes' general theory of economics would only be formally published in 1936.<sup>49</sup>



Figure 2: Vargas reads the 1937 Constitution, which contained several centralizing policies such as the concentration of executive and legislative power in the hands of the President.

As much as he was a strong authoritarian dictator,
Vargas was also a charismatic ruler. In contrast to the
preceding system of *coronelismo*, which ignored and
oppressed the poor classes in favor of the rural elites, his
leadership was engrained on the populist truism of
"government for the people," if only in language.
Observing the significant opposition from the coffee
oligarchy in Sāo Paulo, many leftists believed that he was
hated by the elite in general, and saw that as a favorable
sign. 50 Modern opinions from many sectors of the
Brazilian Left seem to ignore the fact that Vargas was an
anti-communist, going as far as to call him the "Brazilian

Robespierre."51

Vargas also incorporated populist politics and rhetoric into his government, as many leaders in other Latin American countries did during the same period, seeking to create cross-class alliances by uniting fractions of the rich and poor classes under his government base.<sup>52</sup> In the late 1930s, he implemented labor legislations that are in effect until today, including the establishment of minimum

wages and social security. However, these enactments only affected the urban working class and turned a blind eye to rural workers, whose labor conditions remained the same. <sup>53</sup> Vargas had most of his support coming from the large sugar barons, and imposing labor policies on the sugar industry would surely hurt his political base by a great deal.

To further his popularity with the masses, Vargas also enacted democratic measures, as paradoxical as that may sound during a dictatorship. The years following his rise saw the implementation of the secret vote, and the extension of suffrage to (literate) women and citizens over the age of 18.55 Brazil was the second country in Latin America to extend the right to vote to women, only behind Ecuador.56 Despite all that, the Vargas government was still a dictatorship and a strong one, characterized by concentration of power in the federal government, weakening of state influence, and swift crushing of the multiple revolts that took place during those fifteen years.57

In the Vargas era, the main guidance of the decision-making apparatus was the strong nationalistic principle of development-oriented, state-run reforms.

Underlining this national plan was the alliance comprised of the elite dairy and sugarcane barons, who supported the dictator and exerted a clear influence in his decisions. Their interests are reflected in several policies implemented in this period, such as the creation of the IAA and the non-appliance of labor laws to rural workers in any way other than a theoretical one. The level of state support provided to the sugar industry by the EECM in the previous period was nothing compared to the wide-ranging assistance provided by the IAA and other policies enacted by Vargas. The undemocratic way in which the country was run in this period

facilitated the implementation of these decisions, and the only force checking Vargas's power at this point was the one who would later seize it: the military.

Table 3: THE VARGAS ERA (1930-1945) - SIMPLIFIED OVERVIEW				
<u>Democracy</u> <u>Advancements</u>	Secret Vote	Extension of vote to Women and over 18		
Relevant Democracy Gaps	Centralization of Political Power (Dictatorship)	Weakened State Power	Labor Legislation not enforceable in rural areas	
Relevant Political Forces	National Interests: Developmentalism, Populism, State Corporativism	Agribusiness Oligarchies (Center- South Sugarcane industry)		
Status of Ethanol Industry	IAA: Mandatory 5% ethanol blend, construction of refineries, heavy investment (much higher than previous period)	State as a driver of development for ethanol industry	Vertical Integration: Small producers out of business	

## THE "DEMOCRATIC" PERIOD (1945-1964)

At the end of World War II, in 1945, Getúlio Vargas's dictatorship was coming to an end. Having allied with the United States, Brazil now faced severe international pressures to promote a democratic system as opposed to a statist one. Aware that his political support as a dictator was wearing thin, Vargas initiated the process of "democratization" in Brazil. The process was strictly controlled "pelo alto" (from above, with no popular participation), and after some political turbulence which included a military coup that removed Vargas from office, the newly elected President was none less than Vargas's minister of war, General Dutra. As one would expect, the new phase was democratic only in name. The military retained significant political power and state control of organized labor continued, as did the repression of the leftist opposition.<sup>58</sup>

This was a period of *de facto* state control over ethanol production, with national enactments of annual quotas and harvest plans for the sugar industry in several states. Due to its inability to accurately account for the ever-changing market forces, the state-driven expansion of the sugarcane industry saw an exaggerated increase in production in the 1950s and 1960s, which ended up causing a surplus of sugar. <sup>59</sup> To counter that, the IAA changed its previously expansionist policy to focus on modernization of the ethanol technology, and invested in increasing competitiveness of ethanol internationally to account for the sugar surplus. The efforts succeeded, and the 1960s saw a remarkable increase in ethanol production. <sup>60</sup>

Most of the economic projects that allowed the sugar industry to regulate its trade balance in this period were based on the concept of *import-substitution*. The

Goals," implemented by president Juscelino Kubitschek, who succeeded Vargas. The Plano de Metas was a national scheme of thirty wide-ranging modernization and industrialization objectives that if closely followed would bring about "fifty years of development in five," according to Kubitschek.<sup>61</sup> The plan, which involved the massive canalization of public and private resources to the benefit of five main sectors of the Brazilian economy, was conducted through the use of a controversial monetary policy that resulted in a rise in inflation and foreign debt, as well as a deepening of economic disparities and forced labor exodus from rural to urban areas.<sup>62</sup> Among the targeted sectors were energy and transportation, as well as base industries. Each of these sectors directly or indirectly relates to the sugar industry, which underwent intense modernization while protected from international competition, and grew accordingly. In less than a decade, sugar would become part of the chief resource exports in the country.<sup>63</sup>

## **DECISIONS** in the MAKING

The main force behind the decision-making apparatus was surprisingly still based on state-run Developmentalism, even after the end of Vargas's dictatorial rule. The political liberalization of the former dictatorship offered a small chance that economic liberalization would follow. However, a crisis in the balance of payments occurred, spurred by the post-war overvaluing of exchange rates in the international arena, which demanded a strong government response. From this point on, *import-substitution* policies were added to the developmentalist model that had been in operation since the Vargas era, becoming a prevalent political tool

used by the Brazilian state to control the fluctuations of its trade balance.<sup>65</sup> This is evidenced in the aforementioned Plano de Metas, established by Kubitschek. The government knew that these new policies were not going to be well received by Brazil's trading partners, who would sustain economic losses as Brazil protected its industries, but nevertheless proceeded with their implementation. This act evidenced that the national plan was a stronger force behind the Brazilian political apparatus than the international influence of allied countries like the United States. The latter only exercised significant clout for a short while, during the end of World War I, evidenced by its influence in Vargas's overthrow.

The number of Brazilians allowed to vote increased in this phase, even though illiterates, who comprised more than half of the population, remained disenfranchised. 66 Despite the obvious restrictions in democratic participation, this period gained the status of "populist democracy," as presidential elections were held and the populace was finally allowed to organize in political parties.<sup>67</sup> In 1945, Vargas founded two parties, the PSD (Social Democratic Party) and PTB (Brazilian Workers Party – not to be confused with PT, Party of the Workers, of which President Lula is part of), and legalized the PCB (the Brazilian Communist Party).<sup>68</sup> This measure would not stand for long, and in 1948 the PCB was ruled back into illegality, a measure that caused massive demoralizing and unrest among the Brazilian labor organizations.<sup>69</sup> This unrest would help spur the beginning of a peasant movement called *Ligas Camponesas*, ("Peasant Leagues"), one of the only significant manifestations of civil society at that point. The movement grew through the 1950s and 1960s to encompass more than forty thousand participants throughout the rural northeast and several other states. This growth worried the

traditional agricultural and military landowners of the region, who became especially disturbed by the prospect of the Leagues' ultimate policy goals: the establishment of agrarian reform in the country.<sup>70</sup>

Although this was a period of alleged democratic rule, certain democracy gaps did not allow for adequate popular participation in the political process. These gaps included the restricted electorate (only literates could vote), limitations on political mobilization (with the Communist Party being branded illegal), and the "from above" democratization process, in which little room was left for any modifications in the political procedures prevalent since the Vargas era. The only popular mobilization, the *Ligas Camponesas*, was swiftly brought to an end with the military coup in 1964, and its leader arrested and exiled.<sup>71</sup>

These gaps allowed for the maintenance of the same developmentalist model focused on industrial growth that was used in the Vargas dictatorship, this time with the addition of import-substitution policies, which deepened the social inequalities already present in the country. Coalitions of large corporations and agribusinesses received heavy investment and state-funded modernization, further establishing their influence on the political apparatus (now represented through political parties like PCB and PSD). The political influence of the United States and other trading partners also diminished as the import-substitution strategy was seen as more important than maintaining a trade balance with the U.S. In the end, the major political forces were still the national plan and the agribusiness lobbies. Through this analysis one can conclude that the decision-making process in the "democratic" interlude in Brazil was a slightly modified version of the system that was already in place.

Table 4: "DEMOCRATIC" PERIOD (1945-1964) – SIMPLIFIED OVERVIEW					
<u>Democratic</u> <u>Advancements</u>	Voting system for el Presidents; end of a d	Larger electoral body		Formation of Peasant Leagues	
Relevant Democracy Gaps	Restricted Electorate (Illiterates couldn't vote)	Restricted Political Mobilization (PCB made illegal)		Democratization "from Above"	
Relevant Political Forces	Agribusiness Oligarchies (modernized)	State Interests (Plano de Metas) Modernization / Import-Substitution		Party Competition (PTB, PSD, UDN)	
Status of Ethanol Industry	<i>De Facto</i> State control over Industry	Modernization (IAA policy change)		Increase in Exports	

## THE MILITARY ERA AND PRO-ÁLCOOL (1964-1985)

I think [PRO-ÁLCOOL] was one of the most impressive R&D programs with practical results ever done by humankind.<sup>72</sup>

- Alexandre Aidar Jr.
Present-day CEO of the International Ethanol Trade
Association

Greatly due to the extensive modernization the sugar industry went through in the 1960s, by the 1970s the commodity represented one of Brazil's major export products, together with coffee and citrus. However, despite continued the efforts by the EECM and the IAA to make ethanol affordable, Brazil was still importing 80% of its gasoline.<sup>73</sup> Hence, the 1973 embargo promoted by OPEC countries that shot up the prices of petroleum impacted the country severely, causing a financial crisis. The effects of the 1973 oil crisis were aggravated by factors such as the rise of inflation, international interest rates, and foreign debt, and the Brazilian economy suffered a great hit.<sup>74</sup> The crisis created a bottleneck in the national economy, and such context proved favorable to the emergence of several alternatives to gasoline such as ethanol, coal, or vegetable oil.<sup>75</sup> However, the upheaval that the crisis caused in the sugarcane industry led to the orchestration of interests that favored the creation of the largest ethanol program ever implemented in the history of the country: the PRO-ÁLCOOL.<sup>76</sup>

Officially launched in 1975 as one of the enactments in the Second National Development Plan (PDN II) by military President Ernesto Geisel, PRO-ÁLCOOL was different than past projects in several ways. One of the differences was the inclusion of a new goal for ethanol in research efforts: the development of economically viable

hydrous sugarcane ethanol, the kind that can be used as a complete substitute for gasoline, as opposed to a mixture. The explicit objectives of the PRO-ÁLCOOL included increasing the net supply of foreign exchange and the growth of domestic capital goods, and reducing Brazilian dependency on the highly volatile foreign oil.<sup>77</sup> It was part of the import-substitution model that the military government had adopted, just like in the previous era. Additionally, having self-sufficiency in energy was seen as a matter of national security by the military body.<sup>78</sup> However, PRO-ÁLCOOL was also clearly intended to rescue the sugarcane producers hurt by the plummeting of sugar prices that same year, by increasing demand for agricultural and distillation equipment.<sup>79</sup>

PRO-ÁLCOOL is the best known of the several ethanol expansion programs because it developed expertise that significantly improved the efficiency of sugarcane-based alcohol fuel, pushed automakers to create vehicles that ran on ethanol, and created a market demand domestically, transforming Brazil from a nation which used to import most of its fuel to the world's largest ethanol exporter and second-largest producer, dominating the technology for a cleaner, more sustainable fuel product.<sup>80</sup> There were a number of evolutionary phases in the program, each one employing different sets of policies to respond to fluctuations in oil prices. The initial phase included subsidies and incentives for ethanol production to be used as an additive to gasoline. A second phase consisted in "accelerated expansion" of ethanol, this time to produce the hydrous kind that could be used as a complete substitute for gasoline.<sup>81</sup> Overall PRO-ÁLCOOL was a far-reaching and wide-ranging project, encompassing an arrangement of tax breaks, price control, heavy subsidies and explicit control of alcohol demand. One of the main instruments

used by the Brazilian government to stimulate the increase of sugarcane production and industrial capacity of ethanol transformation were credit subsidies given to approved projects.<sup>82</sup> These subsidies were crucial to the development of PRO-ÁLCOOL, but resulted in massive land concentration and the consolidation of sugarcane monoculture, an effect augmented by the effect of scale production and the increase of production quotas.<sup>83</sup>

TABLE 5: INVESTMENTS IN PRO-ÁLCOOL BY BRAZILIAN GOVERNMENT UNTIL 198584			
YEAR	MILLION USD (1986 value)		
1976	136		
1977	891.4		
1978	878.20		
1979	924		
1980	1030		
1981	1841		
1982	835.4		
1983	509.8		
1984	963.6		
1985	353.1		
Total	8364		

One of the issues present in the development of a new fuel is the associated automotive technology necessary to make it utilizable by the populace. The military government solved this problem by offering attractive incentives for automakers to produce alcohol-run cars. By the end of the 1970s, the auto industry had responded with vigorous interest in producing ethanol-operated cars, hoping that the price incentives implemented by the government on hydrous ethanol would stimulate consumer demand and allow them to increase their auto exports. Their interests coincided with the government, who subsidized the alcohol cars, set up alcohol pumps in gas stations, and increased ethanol supply. In less than a decade,

PRO-ÁLCOOL was already considered a success.<sup>86</sup> In the 1980s, thanks to this effort, the use of alcohol as a fuel had become a reality in Brazil, and virtually every new car sold in the country ran exclusively on ethanol.<sup>87</sup> Although terrible from a redistributive standpoint, the military's state-led approach to industrialization inherited from the era of Getúlio Vargas was remarkably successful at fostering economic growth in the country as a whole, reinforcing the prevailing view that the state should be the main driver of economic growth in the country.<sup>88</sup>

#### **DECISIONS** in the MAKING

Today you're the one who rules
What you say is a fact
There is no discussion
Today my people walk
Murmuring quietly
Staring at the floor, see

Chico Buarque de Holanda<sup>89</sup>

Far from being an innovative policy idea, PRO-ÁLCOOL was a culmination of policies and interests that had already been in operation for over 40 years, implemented as part of a larger national plan of development. At this point, the plan in question was the II PDN, the Second Plan of National Development (1975-1979), established by one of the presidents of the military regime, Ernesto Geisel. Geisel was appointed to presidency in 1974, and immediately established the II PDN to counter the difficulties that the economy was facing. This plan implemented policies of invasive state control and outright suppression of free expressions, marking Geisel's position as a military dictator. 90 His ideological bases were strictly anti-

communist (He considered the communists subversive and dangerous), authoritarian and nationalist. Like Vargas, Geisel was a developmentalist, believing that the path towards national growth was the creation of a strong state-directed economic base and the adoption of an import-substitution strategy. In his government (as well as in subsequent ones), the political participation of



Figure 3: President Geisel (1974-1979), the military dictator who implemented the PRO-ÁLCOOL

the working force, civil society, and press was practically inexistent.91

The II PDN was the last national plan of economic development idealized and effectively implanted in Brazil. The national growth plans enacted by the military governments were developmentalist in nature, and focused on the idea of Brazil as a rising power. One example is the I PDN, implemented by Geisel's predecessor, President Médici (1969-1974). The I PDN spurred what became known as the "Brazilian Miracle:" a time of exceptional growth, despite the severe deepening of social inequalities and concentration of income in the hands of the elites. Plans like the I PDN had absolutely no distributive character to them. 92 Médici himself illustrated that as he famously said: "The economy's going well, only the people are not."93 Besides income concentration, the daring development plans at the time were implemented using borrowed foreign capital, which contributed to an enormous increase in foreign debt.<sup>94</sup> The need to promote growth in the country overpowered any other forces at the time, and the enrichment of the elites through these plans of development indicates that they still had an influence in the way policies were planned and carried out.

None of the remaining military presidents veered away from the developmentalist character of the period, and many expanded the existing growth-oriented policies. Because the military era was characterized by a technocratic model in which an institution rules the country as opposed to individuals, while also encompassing violent repression of free expression and complete lack of democratic participation, it was the perfect example of a *bureaucratic authoritarianism*; The state was authoritarian, but the government was not represented through an individual or group of individuals; rather, the political apparatus consolidated itself through a well-institutionalized technocracy.

During the 1970s, another period of political liberalization began, as the country faced a \$90 billion foreign debt and renewed international pressure, which eventually lead to a re-democratization of the country in 1989.97 This process was also initiated and controlled from above, and although there were signs of an emergence of civil society in the form of popular mobilization/protests in favor of direct voting, as well as the formation of the Party of Workers (Partido dos Trabalhadores), the transition into democracy happened peacefully with democratic elections being held in 1985, as the military junta had planned.98

Table 6: MILITARY DICTATORSHIP (1965-1985) – SIMPLIFIED OVERVIEW				
<u>Democratic</u> <u>Advancements</u>	Some evolution on voting rights	Creation of Workers Party		
Relevant Democracy Gaps	Totalitarian, Dictatorial Regime: Suppressed opposition and press	Suppressed Mobilization: End of Peasant Leagues	Bureaucratic Authoritarianism	
Relevant Political Forces	Military State Interests: Developmentalism, Import-substitution, Brazilian Miracle		Agribusiness Oligarchies	
Status of Ethanol Industry	PRO-ÁLCOOL: Largest ethanol program; Massive capital mobilization; Production of hydrous ethanol		Hegemony of Sugarcane Monoculture	

#### THE NEW REPUBLIC (1985-PRESENT)

"It's a combination of strong public policy and the free market. That's the Brazilian secret."

- Mauricio Tolmasquim, president of a federal energy-research agency based in Rio de Janeiro. 99

With the end of the dictatorial era and the promotion of democracy, the alliance between the political leaders and the sugarcane lobby did not disappear, nor did the PRO-ÁLCOOL program instantly end. However, a sharp drop in oil prices in 1985-1986 led to a decrease in consumer demand for ethanol, and the sugarcane industry responded by switching production from alcohol to commercial sugar. This caused an ethanol shortage in 1989, ironically resulting in Brazil becoming a net importer of the product. Fiscal deficits and extremely high inflation numbers led the government to start cutting back subsidies for the ethanol industry. People stopped buying alcohol-run cars and car manufacturers stopped producing them, and by the mid-1990s only taxis and rental cars were still ethanol-run. Accounts from Brazilians tell of the general mistrust that the population felt towards ethanol at this time, since its prices could not be trusted to remain stable. Those who had invested in alcohol-run vehicles regretted having done so.

The IAA, old friend of the ethanol industry, was finally dissolved in 1990.<sup>102</sup>
However, that did not represent the end of ethanol policies. In the same year, the
National Department of Fuel (DNC) was created and became responsible for ethanol
market regulation. Functions that the IAA used to perform were passed on to the
DNC. Other organs in the Brazilian government, such as the Ministry of Economy,
Finance and Planning and the Secretariat of Regional Development, were in charge
of regulatory measures such as the pricing and control of fiscal and credit policies,

as well as the supervision, coordination and standardization of ethanol-promoting acts. <sup>103</sup> This became known as the third stage of PRO-ÁLCOOL.

The fourth stage was when these procedures came to end, under the administration of Fernando Henrique Cardoso. As his economic policy started veering towards liberalization, privatization and stabilization, maintaining such a grand project like PRO-ÁLCOOL became unsustainable. Still, the mandatory blend of 20% ethanol (E20) in all gasoline sold in the country remained through Cardoso's government. As a rationale to maintain this policy active, environmental reasons were brought into discussion for the first time in Brazil – it was said that maintaining E20 would help reduce emissions of lead and other pollutants, while helping sustain the industry through hard times. 106

It didn't take long for ethanol to make a triumphant comeback into the Brazilian economy, however. As the industry saw itself without all the government assistance it enjoyed for so long, it began to depend much more on market mechanisms and started investing in its own technological modernization. In 2003, automakers introduced the flex-fuel car, an innovation that quickly changed the scenario for ethanol demand. Flex-fuel vehicles could run on alcohol or gasoline, or any blend of the two. Consumers were delighted with the possibility of being able to chose whichever fuel was the cheapest in the gas stations, as opposed to being stuck with one option or another, at the mercy of the highly volatile fuel prices. The new vehicles, which in 2003 represented 16 percent of new cars sold in Brazil, we accounting for 73 percent in February 2006. Today, most cars roaming the streets of Rio de Janeiro or São Paulo are flex fuel. Cardoso stimulated the flexfuel craze in 2002 by implementing a tax break on flex-fuel vehicles sold in the

country, but refrained from conducing further promotion policies at the federal level. Local governments, on the other hand, began investing massive capital in R&D to develop new varieties of sugarcane, enhanced milling capacity, improved management based on operations research, and other contributions that could result in higher productivity for the ethanol industry. Not coincidentally, most of these local efforts came from Sāo Paulo, the state where most of the sugarcane industry is concentrated in, and where it exerts extreme political influence. The state had also previously taken part in funding flex-fuel research.

In recent years, ethanol-promoting policies have been revived at every level of government, and they include price floors, major subsidies and minimum blend requirements, the latter having never been completely removed since the Vargas era. Current president since 2003, Luis Inácio Lula da Silva is a passionate champion of ethanol. During his eight years in the presidency, Lula took heavy diplomatic steps to promote ethanol internationally, defend it from social and environmental criticisms, and condemn countries that protect their energy industries against Brazilian biofuels through tariffs on trade. The main platform upon which the

President bases his ethanol promotion discourse is no longer rooted in a national-developmentalist model. Although Brazil's economic takeoff and energy independence is still a part of the speech, the environmental argument has acquired a lead role. The Lula administration has repeatedly argued that



Figure 4: Lula drives a flex-fuel car, demonstrating his support for the new technology and for ethanol development

promoting Brazilian ethanol is part of a commitment to reducing emissions and

complying with the Kyoto Protocol.<sup>114</sup> As he inaugurated the first ethanol-run power plant in Brazil, Lula expressed his commitment to the environment, while also evidencing a developmentalist tone in his speech:<sup>115</sup>

"Especially now that we're discussing the question of global warming, Brazil, once again, has taken the lead and demonstrated to the world that it is possible to create a less environmentally harmful energetic matrix with ethanol, which could also create many jobs."

While it voices environmental concerns to promote ethanol in the international arena, it is clear that the government's ambitions go far beyond helping stave off global warming. In the same speech, Lula also said:

"I am particularly convinced that the moment is ripe for investment in education and technological innovation, and this will make a world of difference to the growth and development of our country. I believe Brazil is on the right track to develop itself and gain international weight in the technological innovation sector."

One can see that the major force behind the effort to promote the industry has remained a state-led effort. The problem with the new environmental tone to the Brazilian government's speech is that many studies have linked ethanol production to alterations of land use in the Brazilian agricultural land, which could lead to deforestation of the Amazon rainforest. This would cause more harm than good to the environment. That does not seem to affect Lula's resolve, however, who responds that there are sugarcane does not affect the Amazon negatively since it is not even "a good area for sugar cane production." Nevertheless, studies have shown that ethanol production can indirectly cause rainforest degradation, since it displaces ranchers, who then proceed to move up further into the Amazon,

converting rainforest into grazing land. The government has not yet addressed this last concern in a significant way.

The presence of the sugarcane industry's interests in decision-making is better illustrated by the actions of Lula's soon-to-be successor, Dilma Rousseff. President-elect as of 2010, Rousseff has already stated that she is committed to investing in the national and international aspects of sugarcane-based ethanol so that in next years it will represent about more than 80% of liquid fuel consumption in Brazil.<sup>119</sup> This statement means that more programs benefiting the ethanol industry will almost certainly be implemented. Rousseff made this announcement on a conference of the new TOP ETANOL – AGORA project, a recent venture promoted by an alliance between the Brazilian government with a coalition of sugarcane growers, with the stated objective of promoting green energy and biofuels around the world. 120 The program describes itself in its website as the "Greatest institutional communication initiative of the sucro-energetic productive chain."121 Upon further exploring their website, one may see that Project AGORA not only promotes "effective communication between cane-growers and policy-makers," but also provides educational material to be used in public schools, educating children about the benefits of clean energy and dangers of global warming, i.e., the importance of ethanol for the world. Indeed, the comeback of the ethanol industry was nothing short of triumphant.

Over 20 years, subsidies towards ethanol development have amounted to over thirty billion dollars.<sup>122</sup> At present, Brazil is the largest producer of sugarcane in the world, growing it on five percent of its 62 million acres of agricultural land.<sup>123</sup> Still,

the alliance between the political elites and the powerful sugarcane growers strengthens itself with each administration, and both federal and local policy focuses on the success of ethanol. While environmental concerns may have a rightful place in these endeavors, they were only significantly adopted in this last period, and cannot solely justify why the Brazilian state has been engaged in developing the ethanol industry for all these decades, especially when several studies point to undersides of this "clean energy revolution." A continuation of the state-led national-developmentalist objective, tied with the strong influence that the industry exerts on decision-making, is a much more plausible explanation for the massive commotion around ethanol that still characterizes the Brazilian political body today.

## **DECISIONS** in the MAKING

The Nova República, like the limited form of democracy established in 1945-1946, was [...] compromised by its origins. It was built on the institutional foundations of the authoritarian regime it replaced.

Leslie Bethell 124

Right before the oil price drop and subsequent ethanol crisis, in 1985, democratic government had returned to the country through a manipulated "democratic opening" by the military junta. However, as the quote suggests, Brazil was not completely devoid of the built-in structures that had been implemented throughout the decades. Although the country had become a presidential democracy, the military still kept a watchful eye on the political process, undermining its legitimacy. As the transition happened, presidents were not allowed to exercise their power to the fullest, a fact that left long-term consequences in the confidence the population felt towards the democratic

process.<sup>126</sup> Several other factors such as social and civil inequality, as well as the corrupted judicial system, also illustrate the fact that many institutions in Brazil remained undemocratic and discredited.<sup>127</sup>

Brazil does have a civilian government, and most of the violent oppression of the military era is gone. The country finally enjoys free press and political association. However, one would have to overlook several factors to consider the country a full-fledged representative democracy at this point. Lula's antecessor, Fernando Henrique Cardoso, can illustrate this allegation. His policies might have been beneficial to the country, but they had to be mostly implemented via *medidas* provisórias (provisory measures), which are constitutional but wholly undemocratic ways of bypassing congress to conduct policy. 128 The reason why he resorted to these means is that the Brazilian constitution is so wide-encompassing that any major reform entails a constitutional one, which is extremely difficult to implement in the current system since it requires the support of 60 percent of both legislative houses in two separate occasions to pass. With the level of political absenteeism in Brasilia, such feat is almost impossible. 129 In any case, a country where a President needs to circumvent the very national system he represents can hardly be called democratic.

In the latest elections of 2010, President Lula enacted Law 9504/97, which essentially prohibits radio and TV stations from airing jokes about candidates during election season. Whoever knows Brazilian culture knows how crucial a role humor plays in it, and how important it is as a vehicle of information, political information included. This was the way seen by many critics to expose the ridiculousness of Brazilian candidates for Congress, which – ironically – even

included a famous TV clown, who despite being supposedly illiterate, managed to be elected minister in 2010.<sup>131</sup> Both Lula's unconstitutional invasion on the right to free speech, and the fact that an illiterate clown can have a seat in congress is very telling of the disjunctive democracy Brazilians still live in. It is an almost amusing exercise to imagine how such situations would have been dealt with had they happened in a country like the United States.

The very election of the clown (known as "Tiririca") opens up certain questions for discussion. The Brazilian population is finally allowed to vote in general suffrage. On face value, this is a very positive indicator of democracy. However, the miserable and illiterate segment of the population is a constant target of various kinds of set-ups by fraudulent candidates that literally purchase their votes with patronage as simple as t-shirts and food. These politicians take advantage of the fact that voting in Brazil is mandatory, and that roughly 50 of 175 million citizens in Brazil are extremely poor. Additionally, Brazil is one of the most unequal nations in the world. In such a country, it is easy to buy votes from uneducated, disadvantaged people. 132 This renaissance of the bridled vote perverts the notion of democratic participation, diminishing the significance of the democratic advancements achieved through the past decades. Too many democratic gaps plague Brazil today, evidencing that several structures created and nurtured during undemocratic times have been preserved. These structures have permitted the government to face very little opposition as it enacted national development plans that benefitted agribusiness industries while deepening social gaps between the rich and the poor.<sup>133</sup>

Table 7: THE NEW REPUBLIC – SIMPLIFIED OVERVIEW				
<u>Democratic</u> <u>Advancements</u>	Democratic Participation; end of dictatorship		Free press, freedom of association, end of political oppression	
Relevant Democracy Gaps	Disjunctive Democracy: Social inequalities		Unconstitutional enactments	Unequal State representation
Relevant Political Forces	Agribusiness Oligarchies		State-led efforts: environmental, developmental, international recognition	
Status of Ethanol Industry	End of subsidies	Remaining support by local governments and international promotion at the presidential level		

## BRAZILIAN DEMOCRACY - A HISTORICAL PROBLEM

Scholars have stated that a significant difficulty in transitions from an authoritarian regime to a democratic one is that many times built-in constraints remain, which can severely damage a new regime's capacity to consolidate new political institutions, leading to a system that is not truly democratic, or where popular participation is not completely established. 134 The Brazilian case is an example of such a regime. The decision-making process in the country has always been driven by a developmentalist model, which focuses on government-driven national development while serving the interests of the elite. The reason why policies of ethanol promotion seemed to live through changes in governments as easily as they have is uncertain, but after having examined the story of the commodity, it seems indicative that the permanence of several of these undemocratic structures in the country have aided the prevalence of a stateoligarchy alliance. This alliance managed to resist change as political liberalization and shifts in regime took place, and it is very probable that the ethanol industry exerted most of its influence through political organs that remained frozen in time as the system changed. There are accounts, for instance, that the main actors that influenced public policy oriented towards the ethanol and sugarcane industry were actually the senators and representatives of the National Congress, as well as local state governors and mayors of the cities with sugarcane industry presence. 135

In any case, it is indisputable that the government was key to the consolidation of ethanol fuel in Brazil, having engineered several kinds of comprehensive public policy that coordinated issues such as provision of funding

for land use, mechanisms of product chain stabilization during crises with oil prices, development of feedstock production chains, and provision of storage, transport, and blending infrastructure. This resulted in the development of an important commodity, which helped the country in maintaining a favorable trade balance and gaining independence from foreign oil. Government policies that help a national industry are not inherently bad, but it is crucial for the maintenance and advancement of democracy in the country that said policies encompass wide participation from every actor in society. Subsidies and beneficial policies should be implemented when the entire population, and not just the targeted industry, will benefit. This research has found that such has very seldom been the case throughout Brazilian history. The product of the

This study has outlined the evolution of the decision-making process in Brazil through the story of ethanol development, highlighting the main forces that have influenced the each major regime and the democracy gaps that have plagued them throughout the decades as democracy advanced. These democracy gaps have allowed governments to effectively join hands with the agricultural elites and promote mutually benefitting policies, marking the Brazilian decision-making process as mainly guided by state plans and agro-industrial interests.

In terms of democracy, one must ask oneself if it is ever possible to reach a level in which civil society will accurately be represented in the political process, especially in a country of 175 million people, many of who are illiterate and poor.

Some scholars believe that education is the key for a stronger democracy. Bethell quotes the well-known Brazilian educator Anísio Teixeira, who says "There will only

be democracy in Brazil the day the machine (máquina) that prepares people for democracy – the public school – is assembled in Brazil."138

Although the process of decision-making has changed little in the past decades, the several advancements in areas such as universal suffrage, free press and better-mobilized civil society could allow Brazil to start heading towards a better and more fairly represented political situation. For those who haven't lost hope of accomplishing the project of a sovereign, free and just Brazil, the challenge remains to accomplish what the nation proposed in 1988:

"(...) a Democratic State, destined to safeguard social and individual rights, freedom, safety, welfare, development, equality and justice as supreme values of a fraternal, pluralist society without any prejudices, founded in social harmony and compromised, in the internal and international order, with the pacific solution of controversies." <sup>139</sup>

<sup>&</sup>lt;sup>1</sup> Sizuo Matsouka, Jesus Ferro and Paulo Arruda. "The Brazilian experience of sugarcane ethanol industry." *The Society for In Vitro Biology* 45 (2009), p. 373 <sup>2</sup> Michael Carolan. "A Sociological Look at Biofuels: Ethanol in the Early Decades of the Twentieth Century and Lessons for Today." *Rural Sociology* 74, no. 1 (2009), p. 89.

<sup>&</sup>lt;sup>3</sup> Shai Agassi. "World Without Oil: Better Place Builds a Future for Electric Vehicles." *Innovations Case Narrative* (Fall 2009), p. 126

<sup>&</sup>lt;sup>4</sup> Matsouka, Ferro and Arruda, p. 374

<sup>&</sup>lt;sup>5</sup> Christine Bolling and Nydia R. Suarez. "The Brazilian Sugar Industry: Recent Developments." *Sugar and Sweetener Situation & Outlook* 232 (September 2001), p. 15

<sup>&</sup>lt;sup>6</sup> José Goldemberg, Suani Teixeira Coelho, Plinio Mario Nastari, Oswaldo Lucon. "Ethanol learning curve—the Brazilian experience." *Biomass and Bioenergy* 26 (2004) p. 301–304

<sup>&</sup>lt;sup>7</sup> Pery Shikida. "The Economics of Ethanol Production in Brazil: A Path Dependence Approach."

<sup>&</sup>lt;a href="http://urpl.wisc.edu/people/marcouiller/publications/URPL%20Faculty%20Lecture/10Pery.pdf">http://urpl.wisc.edu/people/marcouiller/publications/URPL%20Faculty%20Lecture/10Pery.pdf</a> (Last Accessed: 10 October 2010), p. 1

<sup>&</sup>lt;sup>8</sup> Arnaldo Jabor. "May Shit be with You." (English Translation by Wilson Velloso) *Brazzil Blog* (1 June 2002) <a href="http://www.brazzil.com/2005-mainmenu-79/49-june-2001/6715.html">http://www.brazzil.com/2005-mainmenu-79/49-june-2001/6715.html</a> (Last Accessed: 21 November 2010).

<sup>&</sup>lt;sup>9</sup> Teresa Caldeira and James Holston. "Democracy and Violence in Brazil." *Comparative Studies in Society and History* 41, no. 4 (October 1999), p. 691, 695 <sup>10</sup> Bolivar Lamounier. "Brazil at an Impasse." *Journal of Democracy* 5, no. 3 (July 1994), p. 73

<sup>&</sup>lt;sup>11</sup> *Ibid.*, p. 74

<sup>&</sup>lt;sup>12</sup> Leslie Bethell. "Politics in Brazil: From Elections Without Democracy to Democracy without Citizenship," in *Daedalus: Journal of the American Academy of Arts and Sciences* 129, no. 2 (Spring 2000), p. 11-12

<sup>&</sup>lt;sup>13</sup> Alfred Stepan. "Brazil's Decentralized Federalism," in *Daedalus: Journal of the American Academy of Arts and Sciences* 129, no. 2 (Spring 2000), p. 149-150 <sup>14</sup> *Ibid*, p. 152

<sup>&</sup>lt;sup>15</sup> Elisa Reis. "Modernization, Citizenship, and Stratification: Historical Processes and Recent Changes in Brazil," in *Daedalus: Journal of the American Academy of Arts and Sciences* 129, no. 2 (Spring 2000) p. 171

<sup>&</sup>lt;sup>16</sup> *Ibid*, p. 172

<sup>&</sup>lt;sup>17</sup> *Ibid*, p. 173-4

<sup>&</sup>lt;sup>18</sup> Guillermo O'Donnell. "Tensions in the Bureaucratic-Authoritarian State and the Question of Democracy," in *The New Authoritarianism in Latin America*, ed. David Collier (Princeton: Princeton University Press, 1979) p. 285

<sup>&</sup>lt;sup>19</sup> José Serra. "Three Mistaken Theses Regarding the Connection Between Industrialization and Authoritarian Regimes." in *The New Authoritarianism in Latin America*, ed. David Collier (Princeton: Princeton University Press, 1979) p. 102

<sup>&</sup>lt;sup>20</sup> Marc Becker. "Authoritarianism – Latin America – Bureaucratic Authoritarianism," *Science Encyclopedia* 

<sup>&</sup>lt;a href="http://science.jrank.org/pages/8419/Authoritarianism-Latin-America-Bureaucratic-Authoritarianism.html">http://science.jrank.org/pages/8419/Authoritarianism-Latin-America-Bureaucratic-Authoritarianism.html</a> (Last Accessed: 10 December 2010)

<sup>&</sup>lt;sup>21</sup> Wendy Hunter. "Brazil's New Direction." *Journal of Democracy* 14, no 2 (April 2003), p. 156

<sup>&</sup>lt;sup>22</sup> *Ibid.*, p. 158

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