

Spring  
2012

# India's Persistent Food Insecurity

## An Evaluation of Causal Factors

Although India has achieved remarkable economic growth since Independence, it has been unable to provide adequate food security to its citizens. This paper evaluates three main factors: historical, economic, and political, that have helped perpetuate India's food insecure state. The research is based on the amalgamation of the wide spectrum of previous research on the issue.

First, it analyzes how historical events, such as the Green Revolution and Liberalization in 1991, were not entirely successful in initiating effective long-term solutions. Second, the research analyzes how the priorities and effects of economic and agricultural policies further perpetuated the situation. Lastly, a look will be taken at political factors, such as the ineffectiveness of the Public Distribution System, which have failed to provide enough proper solutions to the food security issue. While it is understood that not all factors related to food security will be addressed within the scope of this project, it's importance can be seen in the severe lack of human development for the majority of the Indian population.

*This paper is a supplement to GOVT-596, Politics and Development of India and Pakistan, advised by Professor Mary Breeding (SPA).*



# Introduction

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India, the largest democracy in the world, has failed to provide food security for its people. Despite strong economic growth and development of many industries since its independence, India has been unable to fulfill one of the most basic human development needs for almost half of its citizens. Therefore, this research paper aims to answer the question: What factors or processes have led to India's current dire state of food insecurity?

Historical, economic, and political factors will be identified as some of the main drivers of this issue. With regard to the historical events, the Green Revolution and India's economic liberalization of the 1990s are seen as two of the most important periods which shaped food security policy, or the lack thereof. Economic policies, especially those geared towards the agricultural industry, are important influences on the availability and accessibility of food. By looking at particular policies such as the Public Distribution System and influences on policymaking, the political factors can identify why and how policies are not targeting food security enough to make a substantial difference. There are many more influences on food security such as social systems, international food aid, the role of the media, and conflict which, while important, do not fall within the scope of this paper.

These three factors show that, in order to truly address food security, policymakers need to fully back and implement reforms (despite vested interests), develop preventative reforms, and address the multiple needs and facets of food security.

## Background

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Food security means a government is providing adequate quantity, access, and nutritional value of food to all of its citizens. “Moreover, food should be provided to all as a matter of right without inflicting any humiliation on the poor.”<sup>1</sup> It has been defined as a human right by many international organizations, denoting it as one of the basic human needs that every government should strive to achieve. As will be discussed in the review of literature, the main reason for food insecurity is the lack of ability for individuals to obtain food due to their limited entitlements.

Those who are food insecure usually coincide with those in poverty in a country. The poor have a lack of capacity to feed themselves because of their low to nonexistent income, power, or ability to gain either. “The hungry in the world are hungry because they are poor. They are poor because they own too little resources of land, capital, or skills. Hunger is primarily a problem of poverty and not of food production.”<sup>2</sup>

There are different layers of food security – primary and secondary. As defined by Amitava Mukherjee, a scholar on the subject, primary food security is the main focus of government policies, placing importance on both availability and distribution. The population derives their secondary food security from food products already in nature which do not require production on the part of the people.

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<sup>1</sup> Kirit S. Parikh, "Food Security: Individual and National," in *India's Economic Reforms and Development: Essays for Manmohan Singh*, ed. Isher Judge Ahluwalia and I.M.D. Little (New York, NY: Oxford University Press, 1998), 253.

<sup>2</sup> Ibid., 254.

Mukherjee also classifies different types of food security<sup>3</sup>: *Chronic food security* occurs when individuals of an entire country face persistent insufficient supply of food and proper nutrition. *Transitory food security* can be seen when instability in food production or food prices temporarily reduces access to food. *National aggregate food insecurity* is “when an economy fails to supply its aggregate food requirements even after exhausting all available means to do so.”<sup>4</sup> Lastly, *individual food insecurity* happens when food insecurity is more persistent at an individual or household level due to their income, the food available, and their capacities to obtain said food.

Currently, India has a sufficient supply of food, so it does not fall under chronic food security. While India has been the victim of droughts and floods, and other timely issues, the problem being discussed is not one of transitory food insecurity either. One could argue that India is facing national aggregate food insecurity because, even though the supply of food is available, by having inadequate distribution, India is not supplying that food adequately to its people. “India has achieved a food-population balance or food security at the national level but not food security at the household level.”<sup>5</sup> There is a clear disparity between those that are food secure and food insecure in India, making it obvious that the poor and rural are more susceptible to food insecurity and face a lack of access to food or income to obtain food. National aggregate food insecurity is, as Mukherjee says, an indication of a failure of individual food insecurity, so

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<sup>3</sup> Amitava Mukerjee, *Structural Adjustment Programme and Food Security* (Brookfield, VT: Ashgate Publishing Company, 1994). 68-69.

<sup>4</sup> Ibid.

<sup>5</sup> K.R. Venugopal, *Deliverance from Hunger* (Newbury Park, CA: Sage Publications Inc, 1992). 221.

India falls within this category because it is a national problem and not one of just a few individual cases.

India has never been able to call themselves a food secure country. With developments in technology, the government has been able to procure a large surplus of foodgrains in the last few decades. Yet, they still remain labeled as food insecure. Since effective food security implies achievement of both physical and economic access to food, a large section of our population can still be considered to be suffering from food insecurity despite the bulging stocks of foodgrains with the FCI.”<sup>6</sup>

In comparison to other countries, India stands out as one of the most food insecure, despite its fast economic development. “The FAO’s *Report on State of Food Insecurity in the World 2006* confirms that no country in the world comes close to India in terms of the absolute number of people living in chronic hunger.”<sup>7</sup> “At present, 230 million people in rural areas are undernourished; 40% of children below 3 years of age are underweight and 45% are stunted in growth; the incidence of anemia has risen to the extent of 79% in children below 5 years and 56% in young women.”<sup>8</sup> Scholars have noted some advances in India’s tackling of the food security since its independence, but policymakers have obviously been unable to overcome major obstacles on this issue. In India’s current state, it seems unlikely that they will be able to follow-through with the Millennium Development Goal to halve the number of hungry and poor by 2015 unless it addresses the root causes of food insecurity more seriously.

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<sup>6</sup> C.H. Hanumantha Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India* (New Delhi, India: Oxford University Press, 2005). 137.

<sup>7</sup> Madhura Swaminathan, "Population and Food Security," in *Handbook of Population and Development*, ed. A.K. Shiva Kumar, Pradeep Panda, and Rajani R. Ved (New York, NY: Oxford University Press, 2010), 53.

<sup>8</sup> R.T. Gahukar, "Food Security in India: The Challenge of Food Production and Distribution," *Journal of Agricultural & Food Information* 12(2011): 271.

## Literature Review

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A wide range of authors and scholars cover the topic of food security, looking at it in varying contexts, both international and state-specific. Development economists Amartya Sen and Jean Drèze established much of the theoretical basis on the issue with Sen's entitlement theory and their many partnered works, including *Hunger and Public Action* and the three-volume *The Political Economy of Hunger*. Amitava Mukherjee, author of *Hunger: Theory, Perspectives and Reality*, presents an analysis of hunger from the perspective of a development practitioner, as he is a Senior Expert on Micro Economic Policy and Development with the United Nations. Works sponsored by the International Food Policy Research Institute (IFPRI) and those produced by international organizations, such as the United Nations (UN), are also important in establishing the basis of knowledge on this topic.

The UN's Declaration of Human Rights and the Food and Agriculture Organization's (FAO) 1996 World Summit establish the most commonly used definition of food security: that it is a basic human right comprised of four factors: physical availability of food, economic and physical access to food, food utilization, and stability of the other three dimensions over time. "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."<sup>9</sup> Mukherjee adds to this statement by necessitating that "food that is available is culturally acceptable, has the required nutrition, and there is no institutional sanction against

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<sup>9</sup> UN World Food Summit, "Rome Declaration on World Food Security," ed. Food and Agriculture Organization (Rome, Italy 1996).

accessing the available food.”<sup>10</sup> His extension contributes social context to access. The FAO outlines the following determining factors for evaluating food security: the level of food production, stock and trade; appropriate income, market and prices to provide access; proper nutritional intake of food through utilization; and maintenance of all of the previous three conditions simultaneously.<sup>11</sup>

Amartya Sen's entitlement theory provides a more conceptual framework through which scholars have built their analyses of food security. He theorizes that food security is equal to a lack of entitlements, which are “a set of different alternative commodity bundles that the person can acquire through the use of the various legal channels of acquirement open to someone in his position,”<sup>12</sup> – food being a possible commodity bundle. He finds that food insecurity develops out of an acquirement problem, or how people obtain command over their commodities. Sen's theory introduces a person's capabilities, or capacity to obtain food, rather than solely the government's provision of food, to the discussion. Thus, many new questions are in need of examination in order to further understand food security, such as: Why and how is this capacity built? What are some barriers to access? How do policies, events, and programs effect a person's capabilities to obtain food?

Mukherjee agrees with the basis of Sen's theory, and then tries to fill in the framework's gaps. He extends the lack-of-entitlements explanation of food insecurity to include: institutional sanctions, barriers to choice and a secondary food system, powerlessness and politics, violence

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<sup>10</sup> Amitava Mukherjee, *Hunger: Theory, Perspectives and Reality* (Burlington, VT: Ashgate Publishing Company, 2004). xx.

<sup>11</sup> FAO Food and Agriculture Organization, "An Introduction to the Basic Concepts of Food Security," in *Food Security Information for Action: Practical Guides* (United Nations, 2008).

<sup>12</sup> Amartya Sen, "Food, Economics and Entitlements," in *The Political Economy of Hunger: Entitlement and Well-Being*, ed. Jean Drèze and Amartya Sen (New York, NY: Oxford University Press, 1990), 36.

and militarism, poverty, rapid population growth exerting strain on environment and overconsumption, racism and ethnocentrism, gender discrimination and vulnerability and age.<sup>13</sup> His argument is that Sen's theory does not include a person's ability to choose the proper entitlement of food.

Sen's original theory expanded the network of those involved in food security from just food producers to food receivers as well. He says that a person's ability to command food is determined by their "pull" (ability to obtain food) and their supplier's "response" (ability to provide food), thus identifying the main roles of actors involved. Mukherjee further removes the cause of a person's food insecurity from that individual's responsibility by introducing the role of third parties in affecting the environment in which entitlements could be exchanged for food. His additions show the importance of analyzing the political environment of a food insecure situation, which dictates how a person can take control of their food security. A further extension made by S.M. Ravi Kanbur adds international actors and markets to the picture. Kanbur and other scholars apply this role in the context of food aid. "A major determinant of an individual's access to food in a national setting is their government's access to food in an international setting."<sup>14</sup>

One limitation in much of Sen's applications of the entitlement theory is that he focuses most of his case studies on events of famine rather than prolonged hunger. The case in India, instead, is one of chronic hunger. Scholars, including Sen, agree that although India has made strides towards food security, it still remains dramatically food insecure. "Food supplies have

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<sup>13</sup> Mukherjee, *Hunger: Theory, Perspectives and Reality*: xx, 20.

<sup>14</sup> S.M. Ravi Kanbur, "Global Food Balances and Individual Hunger: Three Themes in an Entitlements-Based Approach," in *The Political Economy of Hunger: Entitlement and Well-Being*, ed. Jean Drèze and Amartya Sen (New York, NY: Oxford University Press, 1990), 62.

increased substantially, but constraints on access to food and continuing inadequacy of household and national incomes to purchase food, instability of supply and demand, as well as natural and man-made disasters, prevent basic food needs from being fulfilled.”<sup>15</sup> Scholars and researchers, such as Ashok Gulati and Shenggen Fan, editors of *The Dragon & The Elephant*, compare the cases of India and China as two countries who have experienced simultaneous economic growth and food insecurity. However, according to a USDA assessment, India's amount of food insecure people is much higher than China's. Discovering why this is the case requires a comprehensive analysis of causation, as outlined by Sen's and Mukherjee's theories, within the Indian context.

Scholars have recognized the complexity of food security, and the methods of their research, as well as the questions they pose, have demonstrated the importance of a multi-faceted approach to a causal analysis. Before Sen's entitlement theory, academics like Malthus only focused on food production as the main factor in influencing food security. He theorized that as long as the food output grows as fast, or faster than the population, hunger won't be a worry. Sen suggests that this one-tracked approach created a delay in policymaking related to hunger due to its false optimism. This analysis begins to build a narrative of how India arrived at its current food insecure state. His entitlement theory demonstrated a shift by fleshing out the web of actors involved in food security and the multiple needs that must be met in addressing the issue. “Long-run policies have to be geared to enhancing, securing, and guaranteeing entitlements, rather than to some simple formula like expanding food output.”<sup>16</sup>

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<sup>15</sup> World Food Summit, "Rome Declaration on World Food Security."

<sup>16</sup> Sen, "Food, Economics and Entitlements," 47.

Mukherjee agrees with Sen's analysis of policymaking, saying that the bureaucracy, government, and scientists believe that food production or genetically-modified food will solve the problem. V.S. Vyas explains the focus on food production: "The agricultural policies in India evolved in the context of food scarcity and were influenced by a 'closed economy' syndrome. They framed two basic objectives: (1) stimulating domestic food production and (2) controlling price increases in basic consumption."<sup>17</sup> These authors all acknowledge the role that Malthus' theory plays in the development of policies on hunger, those built on the faulty assumption that food production is the most integral part of the problem and solution. "Food security and elimination of hunger are much more than food production and food availability."<sup>18</sup>

Drèze, Sen, and Mukherjee argue that food security should be brought to national attention and the true complexities of the problem should be highlighted in the media. While on the cusp of a policymaking narrative on hunger, they have yet to create a more comprehensive analysis by determining why hunger has not been a priority on India's political agenda. These scholars' downplay of the importance of food production brings into question the effect of the Green Revolution on the food security situation in India. Economists, like Panjab Singh in *Economic Reforms and Food Security*, have praised the Green Revolution's outcome in increasing the amount of high-yielding crops.<sup>19</sup> Singh uses this period as an example of the importance of technology in establishing productive and efficient agriculture. However, the

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<sup>17</sup> Anwarul Hoda and C.S.C. Sekhar, "Agricultural Trade Liberalization, Poverty, and Food Security: The Indian Experience," in *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*, ed. Ashok Gulati and Shenggen Fan (Baltimore, MD: The Johns Hopkins University Press, 2007), 266.

<sup>18</sup> Mukherjee, *Hunger: Theory, Perspectives and Reality*: xix.

<sup>19</sup> Panjab Singh, "Technology Options for Achieving Food Security in South Asia," in *Economic Reforms and Food Security: The Impact of Trade and Technology in South Asia*, ed. Suresh Chandra Babu and Ashok Gulati (New York, NY: Food Products Press, 2005).

increase in food supply did not solve the problem, as Mukherjee and Sen theorized. "As for food security in India, with huge food stocks accumulated in recent years, one can say that the requirement of physical availability has been fully met at present, though economic access has not been provided to all segments of the population."<sup>20</sup> The role of this historic event needs to be evaluated through the synthesis of scholars' critiques and analyses in order to understand its part in the narrative of India's food security.

Looking at how economic policies affect poverty gives us a good picture as to how reforms aid or hinder food security goals. According to the FAO, "it is argued that a strategy for attacking poverty in conjunction with policies to ensure food security offers the best hope of swiftly reducing mass poverty and hunger. However, recent studies show that economic growth alone will not take care of the problem of food security."<sup>21</sup> The FAO acknowledges the cyclical pattern of food security and poverty – poverty is a cause of hunger, but lack of proper nutrition is a cause of poverty. Mukherjee and Sen also analyze the connection of these two problems. They agree that poverty is an important factor in food security because it limits the entitlements, for which one can trade for food, available to the individual. S. Mahendra Dev relates this theory to the case of India, saying that it is hard to increase food security due to the low purchasing ability of the poor, placing importance on employment programs as one possible solution.<sup>22</sup> The effects of liberal economic policies on food security are a point of contention among scholars. Weighing

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<sup>20</sup> Hoda and Sekhar, "Agricultural Trade Liberalization, Poverty, and Food Security: The Indian Experience," 323.

<sup>21</sup> Food and Agriculture Organization, "An Introduction to the Basic Concepts of Food Security."

<sup>22</sup> S. Mahendra Dev, "Market Reforms in Agriculture: An Indian Perspective," in *Economic Reforms and Food Security: The Impact of Trade and Technology in South Asia*, ed. Suresh Chandra Babu and Ashok Gulati (New York, NY: Food Products Press, 2005).

the pros and cons, through a look back at the period of liberalization in the 1990s, as well as continuations of these policies, will help evaluate which is best for food security.

Besides the economic and historical elements in need of a comprehensive analysis, assessing food security through a political narrative, like Sen has in his arguments, on the international, state, and household levels is important. Rehman Sobhan embarks on such an analysis in his chapter of *The Political Economy of Hunger: Volume 1*, by emphasizing the importance of household political power in the problem. "Contributions by the state to the entitlement bundle of each household involve major allocative policy decisions and thus reflect the interplay of political forces within the policy."<sup>23</sup> Sobhan explores factors affecting policymaking and public programming decisions, saying that those that are hunger-related are a representation of a politician's acknowledgement of the constituency of those who are food insecure and their role in maintaining regime power. Yet, if that is the case, then the possible counterproductive influence of other constituencies or priorities must be examined, because the food insecure constituency is a large one whose needs are still failing to be met. Despite India's many food security programs, such as school lunch programs, the Employment Guarantee Scheme, and the Public Distribution System, Abusaleh Shariff says that 70% of Indians still suffer from deficiencies in their food intake.<sup>24</sup> These public welfare programs have not fixed the problem. There is a need, therefore, to explore possible barriers, such as corruption, to their proper implementation.

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<sup>23</sup> Rehman Sobhan, "The Politics of Hunger and Entitlement," in *The Political Economy of Hunger: Entitlement and Well-Being*, ed. Jean Drèze and Amartya Sen (New York, NY: Oxford University Press, 1990), 82.

<sup>24</sup> Abusaleh Shariff, "Household Food and Nutrition Supply in India," in *Economic Reforms and Food Security: The Impact of Trade and Technology in South Asia*, ed. Suresh Chandra Babu and Ashok Gulati (New York, NY: Food Products Press, 2005).

Mukherjee's method of analysis in his book *Hunger: Theory, Perspectives and Reality*, exemplifies the multi-faceted approach that he and other scholars demand. He examines the perspectives of "outsiders" (experts, economists, etc.) and "insiders" (those suffering from hunger), and then melds the two together through comparison. "The basic causes can only be understood in relation to the specific historical, ecological, economic, cultural and political contexts in which the hungry people, their economy and society are situated. The basic causes have to be contextualized and categorized according to the foregoing dimensions, to arrive at an appropriate response to deal with it."<sup>25</sup> He gives substance to Sen's theories and his extensions of them through the usage of village case studies, and more of a theory backing to the economic reforms discussed in IFPRI publications.

Since this approach meshes well with the handling of the multiple sides of food security, a similar one will be applied in this paper. The historic, economic, and political factors, for which there have been multiple initial analyses, will be developed further through the synthesis of the vast research available on food security. "This necessitates a detailed analysis of the different layers of causes of hunger and helps delineating different policies to address the problem of hunger at different levels."<sup>26</sup> The narrative approach seen in some of Sen's arguments will be used in such an analysis – developing an analytic narrative – in order to create a story and a comprehensive picture of the factors leading to India's current food security situation.

Analysis of this topic as a whole, and its possible solutions, can lead to a better understanding of the problems hindering India's development. According to the *Rome Declaration*, "reaching sustainable world food security is part and parcel of achieving the social,

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<sup>25</sup> Mukherjee, *Hunger: Theory, Perspectives and Reality*: 78.

<sup>26</sup> *Ibid.*, xxi.

economic, environmental, and human development objectives agreed upon in recent international conferences.”<sup>27</sup> It plays a significant role in determining the success of the Millennium Development Goals. India’s food security is also important to international development. “World food security is of concern to all members of the international community because of its increasing interdependence with respect to issues such as political stability and peace, poverty eradication, prevention of and reaction to crises and disasters, environmental degradation, trade, global threats to the sustainability of food security, growing world population, trans-border population movements, and technology, research, investment, and financial cooperation.”<sup>28</sup> Further study of food security in the case of India can help shed light on its development problems, and provide explanation as to why, even though its economy has grown nationally, the largest democracy in the world still fails to meet the basic human needs of its citizens.

## HISTORICAL

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The two, most recent and influential events in India’s history on food security occurred in the 1960s and 1990s, with the Green Revolution and liberalization, respectively. Each of these events demonstrated shifts in agricultural, economic, and political policies which affected the supply and demand of food in India. From these past experiences in reform, policymakers can draw lessons on what worked and what did not in either direct or indirect efforts to achieve food security.

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<sup>27</sup> World Food Summit, "Rome Declaration on World Food Security."

<sup>28</sup> Ibid.

## Green Revolution

### Background

The Green Revolution was a period in which India, and many other South Asian countries, began using high-yield variety (HYV) seeds and other technological advances in agriculture in order to quickly increase in food production. HYV seeds promote mass production of crops through higher yields than normal seeds by allowing grains in this strain a greater intake of nitrogen. Inputs such as fertilizer and pesticides are integral to their performance. India began using HYV seeds in the 1960s after experiencing severe food shortages and a decrease in food aid from other countries. Research institutions like the Indian Council of Agricultural Research (ICAR) helped transfer this technology into Indian agricultural practice by placing more importance on R&D.

Before the introduction of the Green Revolution, agricultural policies were made as supplements to the real economic focus of the second five-year plan – industrialization. “Under this model, agricultural policy was conceived with a built-in pro-urban bias. To provide inexpensive food and basic inputs for industrial development, the farm prices were kept artificially low and agricultural exports were curtailed through quantitative restrictions and an overvalued exchange rate.”<sup>29</sup>

It was not until India faced extreme food insecurity through food shortages that this issue became a priority. Grain production rates began to fall behind population growth rates, forcing the nation to rely on food imports in the 1950s. Conflicts and two major droughts hit the

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<sup>29</sup> Shenggen Fan, Ashok Gulati, and Sara Dalafi, "Overview of Reforms and Development in China and India," in *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*, ed. Ashok Gulati and Shenggen Fan (Baltimore, MD: The Johns Hopkins University Press, 2007), 27-28.

agricultural industry even harder, increasing India's dependence on foreign food aid. In 1965, the introduction of HYV wheat seeds from Mexico changed the direction of agriculture from one of dependence to a goal of self-sufficiency. With the HYV seeds came the supplemental new input technology – fertilizers and pesticides. Investments in these inputs as well as power, irrigation, and credit helped spread the HYV seeds' impact. "The outcome of the experiment was miraculous, leading to a veritable green revolution."<sup>30</sup> The Green Revolution continued to grow even after the 1960s. In the '70s, economic policy changes and a period of more droughts led to the use of HYV rice seeds. As this technology continued to spread across the country, food production increased and prepared India for when another drought hit in 1987.

The political atmosphere that ushered in this shift in agriculture had a theme of heavy regulation and government interference working towards a goal of food self-sufficiency. This self-sufficiency attitude has continued in many aspects of agricultural policy because politicians do not want to be dependent on foreign foodgrain like they were before the Green Revolution. "The 'scarcity syndrome' had influenced policymaking in agriculture from the beginning, and these considerations continue to exert a strong influence."<sup>31</sup> Many westerners praised the way the Indian government implemented the policies of the Green Revolution. "The Pearson Report characterized the speedy adoption of HYV as 'one of the authentic marvels of our time.'"<sup>32</sup>

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<sup>30</sup> Ibid., 29.

<sup>31</sup> V.S. Vyas, "Market Reforms in Indian Agriculture: One Step Forward, Two Steps Back," in *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*, ed. Ashok Gulati and Shenggen Fan (Baltimore, MD: The Johns Hopkins University Press, 2007), 274.

<sup>32</sup> M.L. Dantwala, *Dilemmas of Growth: The Indian Experience* (Thousand Oaks, CA: Sage Publications Inc, 1996). 100.

## Positive Impacts on Food Security

The Green Revolution did have a strong impact on the increase in food production, which has remained important in carrying over in years since. “At the All-India level, growth in overall yields of individual crops have been of major importance behind the growth in overall yields and production of food grain, indicating the criticality of continuing with policies for sustaining yield-based and technology-based growth in agriculture of ‘tomorrow.’”<sup>33</sup> The scarcity of productive land for agriculture is a big problem in India, and since the Green Revolution increased yield in a way unrelated to acreage, it increased the efficiency of land in use.

Some of the successes of the Green Revolution “trickled down” to the poor in the form of increased farmer income and more food made available to the poor.<sup>34</sup> These benefits included “increasing production, providing more food and nutrients for their own consumption, and increasing the surplus of products available for them to sell for cash income.”<sup>35</sup> It also increased employment for small farmers and migrant workers, stimulated nonfarm economic growth, and helped lower food prices.<sup>36</sup> “Alternative measures [of food security] like changes in the relative prices of food indicate that low-income groups, which spend a larger proportion of their income on foodgrains than the upper income groups, have benefited more than the later from the Green Revolution in India.”<sup>37</sup>

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<sup>33</sup> Mukerjee, *Structural Adjustment Programme and Food Security*: 77.

<sup>34</sup> Fan, Gulati, and Dalafi, "Overview of Reforms and Development in China and India."

<sup>35</sup> Peter B.R. Hazell, "The Asian Green Revolution," in *Proven Success in Agricultural Development: A Technical Compendium to Millions Fed*, ed. David J. Spielman and Rajul Pandya-Lorch (Washington, DC: International Food Policy Research Institute, 2010), 77.

<sup>36</sup> Ibid.

<sup>37</sup> M.H. Suryanarayana, "Nutrition Security in India: Issues and Policies," in *Reforming India's Social Sector: Poverty, Nutrition, Health & Education*, ed. K. Seeta Prabhu and R. Sudarshan (New Delhi, India: Social Science Press, 2002), 173.

The Green Revolution refocused policy back on agriculture and thus, put more (though not enough) emphasis on food security. It spurred the creation of other reforms like price policy, minimum support prices, procurement prices, buffer stocks, the Public Distribution System (PDS), consumer issue prices, and increased institutional support and organization.<sup>38</sup> This period modernized agriculture in India; and with the increase in food production, helped restore confidence in the Indian agricultural system. It also encouraged investments in agricultural R&D and infrastructure, which could lead to better food security solutions. One of the lessons that C.H. Hanumantha Rao draws from the Green Revolution is that “the proposed policy framework has to take into account the need for consolidating food security achieved so far by raising productivity through cost-reducing technological changes.”<sup>39</sup> Rao also says that incentives, such as the minimum support price (MSP), were important in ensuring that farmers actually implemented these technologies.

### **Negative Impacts on Food Security**

The beneficial effects of the Green Revolution spread unequally across regions and between classes of Indians, concentrating in certain areas of the country whose environments and capabilities could make the HYV seeds most successful. It had an unequal impact across India. The spread of the revolution followed a “build on the best” strategy, focusing on areas with good irrigation, few crops, and farmers who could get proper investment.<sup>40</sup> However, according to M.L. Dantwala, the policy-makers were aware of the conflict between the increase in food production and the possible inequalities that the HYV might cause. “The possibility of its

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<sup>38</sup> Vyas, “Market Reforms in Indian Agriculture: One Step Forward, Two Steps Back.”

<sup>39</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 144.

<sup>40</sup> Swaminathan, “Population and Food Security,” 51.

inegalitarian effects – assuming that these could be clearly perceived at that time – had to be weighed against the obvious inequalitarian effects of food shortages and high prices, under which the poor suffer the most.”<sup>41</sup> While it is understandable the pressure that politicians felt in deciding to initiate the Green Revolution, many of these policies still linger, even though the state of food security today has come long past the food shortages of the 1950s. The Green Revolution “contributed to the widening income disparities between: different regions, small and large farms, and landowners on the one hand and tenants and agricultural laborers on the other.”<sup>42</sup> These disparities meant that finding policies to target overall food security became much more difficult because the needs and situations of the Indian people were more drastically different. However, these inequalities cannot be solely blamed on the Green Revolution, but also the lack of supplemental development programs to minimize them.

The policies and practices instituted with the Green Revolution were based on short-term needs and, in many ways, are not sustainable for the long-term. Subsidies to incentivize farmers to use the new technology have been detrimental in the long-term. “These subsidies have a most deleterious effect in terms of reduced public investment in agriculture on account of the erosion of investible resources, and wasteful use of scarce resources like water and power.”<sup>43</sup>

Since the high-yield varieties of seeds available were limited, reliance on what created a domination of this one grain in the market. Nutrition suffered due to a lack in variety of foodgrains. “At first there was extensive opposition to the import of large quantities of HYV

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<sup>41</sup> Dantwala, *Dilemmas of Growth: The Indian Experience*: 101.

<sup>42</sup> *Ibid.*, 100.

<sup>43</sup> Shikha Jha, P.V. Srinivasan, and A. Ganesh-Kumar, "Achieving Food Security in a Cost-Effective Way: Implications of Domestic Deregulation and Liberalized Trade in India," in *Liberalizing Foodgrains Markets: Experiences, Impact and Lessons from South Asia*, ed. A. Ganesh-Kumar, Devesh Roy, and Ashok Gulati (New York, NY: Oxford University Press, 2010), 38.

seeds, owing partly to the potential inequalities they could create in agriculture and partly also to their lower gluten content and less than optimal baking qualities.”<sup>44</sup> As land began being used more widely for high-yield production, those without the capability to obtain this technology or the inputs required for HYV seeds, were pushed out of the agricultural sector. “Improvement in total factor productivity does induce landlessness and adversely impacted income distribution at least in the beginning of the green revolution.”<sup>45</sup>

A lack of training farmers received made the implementation of HYV seeds and subsequent fertilizers and pesticides more costly. They spent time experimenting with usage since they did not know best practices. “The agriculture department is unhelpful in disseminating information to the farmers on use of fertilizer, pesticide and insecticide and even on HYV seeds.”<sup>46</sup> The use of these particular inputs has also made farmers more dependent on the companies that provide them, not to mention the negative environmental impact created by the increase in chemicals used on the land.

The restrictive nature of the policy formations during this period, which was necessary to ensure proper implementation, hurt other areas of the agricultural economy. “The high level of protection accorded to industry produced high industrial prices and adverse terms of trade (TOT) for agriculture, reducing the relative profitability of the primary sector.”<sup>47</sup>

Many scholars suggest a second Green Revolution as a solution to current food security issues, because of the successes in food production and some alleviation of poverty that occurred

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<sup>44</sup> Fan, Gulati, and Dalafi, "Overview of Reforms and Development in China and India," 29.

<sup>45</sup> Fan and Thorat, "Public Investment, Growth, and Poverty Reduction: A Comparative Analysis of India and China," 137.

<sup>46</sup> Mukherjee, *Hunger: Theory, Perspectives and Reality*: 251.

<sup>47</sup> Fan, Gulati, and Dalafi, "Overview of Reforms and Development in China and India," 31.

in the 1960s. Dayanatha Jha and Suresh Pal suggest that the pro-research policies that have been continued as efforts to obtain this second Green Revolution have hurt the overall national economy. There have been unknown total expenditures in the process because this political environment “has undermined the need for systematic monitoring of research resources.”<sup>48</sup>

Even though the Green Revolution produced a noticeable increase in the quantity of foodgrains in India at the time, M.L. Dantwala calls the agricultural growth “unimpressive” because it barely surpassed the growth of the population. The literature tells us that this is a multi-pronged issue. While an important facet, there is much more to food security than production. Many of the other underlying problems perpetuating food security, such as accessibility and capacity, were not addressed by the Green Revolution.

## **Liberalization, 1990s**

### **Background**

Continuing with the goal of self-sufficiency, the Indian government continued its practice of strong regulation and intervention in areas of agriculture and trade that helped usher in the Green Revolution. Policymakers used restrictions to facilitate food security through large food stocks and low prices. “It cannot be denied that the policy of virtual closure of the domestic markets sheltered the agricultural producers from the vicissitudes of import competition, both fair and unfair, and provided price stability, which is essential for growth.”<sup>49</sup>

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<sup>48</sup> Dayanatha Jha and Suresh Pal, "Agricultural Research and Technology in India: Status, Impact, and Contemporary Issues," in *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*, ed. Ashok Gulati and Shenggen Fan (Baltimore, MD: The Johns Hopkins University Press, 2007), 166.

<sup>49</sup> Hoda and Sekhar, "Agricultural Trade Liberalization, Poverty, and Food Security: The Indian Experience," 317.

In 1991, however, their behavior shifted in a period of liberalization. India faced a high deficit and turned to the IMF and World Bank for help. The loans they received came with stipulations for opening up the Indian economy to the world market. “To tackle the country’s fiscal and current account deficits, the government was somewhat bound to the path of macroeconomic and trade interventions. While it could be argued that markets did not need to be created because they were already in place in India, the persistence of a panoply of restrictions on agricultural input and output markets hindered the smooth functioning of these markets and limited the overall competitiveness of the primary sector.”<sup>50</sup>

The 1990s introduced “a series of sweeping macroeconomic and structural reforms in industry, the exchange rate, and foreign trade and investments.”<sup>51</sup> A liberalization of export controls, advances in import controls, and progress on ending internal controls of trade all through the removal or reduction of tariffs and trade restrictions occurred.<sup>52</sup> These reforms included approval for FDI, increasing capabilities for domestic and foreign investment. The 1994 Uruguay Round Agreement on Agriculture was also part of this series of reforms. It further removed tariffs and liberalized international trade to increase market access. India opened up some commodities, including some food products, for import and made reforms to improve the ability to export these goods as well.

Liberalization has continued to be a part of Indian economic policy since this period, but only to a certain degree. Scholars continue to debate on whether or not these policies are most

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<sup>50</sup> *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*, (Baltimore, MD: The Johns Hopkins University Press, 2007). 235.

<sup>51</sup> Fan, Gulati, and Dalafi, "Overview of Reforms and Development in China and India," 32.

<sup>52</sup> Hoda and Sekhar, "Agricultural Trade Liberalization, Poverty, and Food Security: The Indian Experience."

beneficial for the economy, agriculture, and food security. A big question in this debate is if India should increase its dependency on the world market and steer away from self-sufficiency. Anwarul Hoda and C.S.C. Sekhar say that this shift in goals was beneficial. "Self-sufficiency as a prerequisite for food security is fast losing its appeal, and there is growing consensus across the world that greater reliance must be placed on imports with respect to commodities in which a country does not have a comparative advantage."<sup>53</sup> However, Utsa Patnaik argues that moving the focus out of the domestic sector and further into international trade is dangerous. "Under free trade policies that pressure developing countries to remove barriers to trade and shift their land use increasingly to exports, there is uneven distribution between food allocated for domestic consumption versus exports for the benefit of others."<sup>54</sup> Patnaik says that succumbing to developed countries' push towards comparative advantage specialization forms of production will not live up to its expectations. "With dozens of developing countries following the same policies of exporting much of the same products, the per unit value of their exports declined and the terms of trade shifted against them."<sup>55</sup>

### **Positive Impacts on Food Security**

With the initial growth of the economy, liberalization helped expand the entitlements of many Indians. Economic benefits to the agricultural sector through its liberalization helped increase wages in this industry. "The higher rate of economic growth and the consequent rise in per capita incomes resulting from the 1991-93 reforms had a significant impact on food demand.

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<sup>53</sup> Ibid., 322.

<sup>54</sup> Utsa Patnaik, "Origins of the Food Crisis in India and Developing Countries," in *Agriculture and Food in Crisis: Conflict, Resistance, and Renewal*, ed. Fred Magdoff and Brian Tokar (New York, NY: Monthly Review Press, 2010), 86.

<sup>55</sup> Ibid., 96.

[They] led to the diversification of food demand into non-foodgrain crops.”<sup>56</sup> However, this decrease in the demand for foodgrains meant adverse affects for nutrition.

Allowing FDI and increasing trade in agricultural commodities led to more private investment. “As a result of the improvement in terms of trade, private sector capital formation in agriculture rose by nearly 40 per cent between 1993-4 and 2000-01 raising its share to 76.5 per cent in total capital formation in agriculture.”<sup>57</sup>

Before liberalization, economic policies were seen as “anti-agriculture.” “This criticism acquires legitimacy because of what is generally characterized as the ‘failure’ of agriculture. The alleged failure may have a reference to either the growth of agricultural production or the promotion of social justice, or both.”<sup>58</sup> The amount of attention paid to the agricultural sector, especially in regards to trade, helped focus policies back on the industry that would help supply food security. Although, agricultural growth continued to decline after liberalization, Rao attributes this to “the culmination of almost a decade of neglect [in policy], reflected in the declining real public investment in agriculture in the 1980s.”<sup>59</sup> Policies of government intervention in agriculture had ceased to be as relevant as they were in the Green Revolution. “Over time the restrictions on international trade had the effect of disprotecting poor farmers, while the restrictions on domestic trade led to significant regional price variations as well as high expenditures on public operations in foodgrains marketing.”<sup>60</sup>

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<sup>56</sup> Fan, Gulati, and Dalafi, "Overview of Reforms and Development in China and India," 33-34.

<sup>57</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 58.

<sup>58</sup> Dantwala, *Dilemmas of Growth: The Indian Experience*: 88.

<sup>59</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 55.

<sup>60</sup> Jha, Srinivasan, and Ganesh-Kumar, "Achieving Food Security in a Cost-Effective Way: Implications of Domestic Deregulation and Liberalized Trade in India," 48.

## Negative Impacts on Food Security

The positive effects of liberalization did not last very long in some areas. Similar to the Green Revolution, benefits of these new reforms were short-term focused. “It appears, therefore, that there were two distinct stages in post-reform Indian agricultural and the country’s overall economic performance: the first, between 1991 and 1996, which saw higher growth rates of total and agricultural GDP, and the second, between 1997 and 2003, which saw a deceleration in the pace of growth.”<sup>61</sup>

Food production growth actually declined during the 1990s, reversing some of the positive effects of the Green Revolution. “The situation has worsened in the current decade: production of food grain grew at only 1.2 per cent annually between 1990 and 2007, whereas population growth was around 1.9 percent.”<sup>62</sup> Even though terms of trade benefiting agriculture helped promote private investment, investment in the public sector actually declined, hurting agricultural production. “The decline in public investment in agriculture and slowdown in the growth of farm inputs has resulted in a decline in the growth rate of agricultural output in the 1990s.”<sup>63</sup> Rao claims that the rise in farm subsidies, which drain state resources, are to blame.

The Indian government failed to fully embrace and implement liberalization, leaving many policy promises broken. Shenggen Fan, Ashok Gulati, and Sara Dalafi argue that the 1991 reforms left an “unfinished agenda.” With the absence of many necessary supplemental reforms, liberalization could not spread positive benefits across the spectrum of economic and development sectors. Ashok Gulati wrote a chapter in *India's Economic Reform and*

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<sup>61</sup> Fan, Gulati, and Dalafi, "Overview of Reforms and Development in China and India," 39.

<sup>62</sup> Swaminathan, "Population and Food Security," 51.

<sup>63</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 63.

*Development* recently after the liberalization reforms came into place, speculating on how they would affect agriculture and food security. He expressed the worry that if “reformers busy themselves with globalization exercises and are complacent about supply side problems, or in restructuring the PDS, globalization can prove to be a threat and stall the process of reforms in other sectors too.”<sup>64</sup> His concerns proved correct. Immediately after liberalization, in the post-reform period of the early 1990s, “the growth rate in gross domestic product (GDP) had come down significantly; the rate of inflation was high, persisting around 10 per cent for four consecutive years; and the expenditure on social sectors including the poverty alleviation programs slowed.”<sup>65</sup> India maintained many of its restrictive policies and did not let liberalization come into full effect. “In India, interventions to liberalize agricultural trade flows were not accompanied by determinant marketing reforms on the domestic front, which created imbalances in the economy.”<sup>66</sup>

Reforms made during the 1990s did not address many important parts of the economy, attributing to their inability to maintain growth later on. “The lack of reforms in the areas of infrastructure, domestic marketing, and investments has been seen as one of the main reasons for the slowdown in both agricultural GDP and total GDP after 1997.”<sup>67</sup> Most importantly, this series of reforms did not include much needed domestic policy changes to improve the state of food security. “The old support framework with its three main policy interventions – the MSP to

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<sup>64</sup> Ashok Gulati, “Indian Agriculture in an Open Economy: Will it Prosper?,” in *India's Economic Reforms and Development: Essays for Manmohan Singh*, ed. Isher Judge Ahluwalia and I.M.D. Little (New York, NY: Oxford University Press, 1998), 144.

<sup>65</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 200.

<sup>66</sup> *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*: 236.

<sup>67</sup> Fan, Gulati, and Dalafi, “Overview of Reforms and Development in China and India,” 42.

ensure remunerative prices to farmers, input subsidies, and the PDS – remained largely unaffected by the changes in the 1990s, except for the PDS, which underwent some targeting modifications in 1997.”<sup>68</sup> Rao says that the decline in GDP growth experienced in the 1990s was due to “insufficient reforms in the management of rural infrastructure or improper sequencing of reforms bearing on supply side factors such as irrigation and fertilizers.”<sup>69</sup> In both development and agriculture, these safety nets and supplemental reforms were necessary to increase the benefits of liberalization. At the early stages of liberalization, Gulati postulated that “to get full mileage from the reforms already carried out, it is important to address the supply bottlenecks in agriculture – especially water and credit.”<sup>70</sup> Gulati stressed the importance of sufficient safety nets so as to counter the increases in food prices and poverty that would, and did, occur. “The benefits from the Uruguay Round agreements for the poor in these countries would be visible only when the impact of the ongoing economic reforms together with other measures to augment infrastructure and skills begin to yield results in terms of improving supply elasticities and employment.”<sup>71</sup>

Liberalization had a pro-consumer bias and negatively impacted many of the rural poor. “Trade liberalization, agricultural reforms and other sectoral and structural adjustment measures have served to marginalize the poor in rural areas, to reduce the availability of productive

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<sup>68</sup> Ibid., 39.

<sup>69</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 67.

<sup>70</sup> Gulati, “Indian Agriculture in an Open Economy: Will it Prosper?,” 135.

<sup>71</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 176.

farmland for cultivation for the local market and to undermine food security.”<sup>72</sup> The changes in commodity demand emphasized the “off-farm” sector, which was difficult for the rural poor in lesser developed areas to use to their advantage.<sup>73</sup> Policies increased and added subsidies for power, fertilizer, and food, which, according to V.S. Vyas, have negative repercussions on the poor. A stronger focus on trade of food goods caused a decline in agricultural employment. Researchers on the topic disagree as to the degree of liberalization’s effect on poverty, with official numbers showing a small increase in poverty at the beginning of the 1990s. This debate is part of a bigger discussion on how to appropriately measure poverty rates. According to Utsa Patnaik, the numbers give a false sense of lower poverty. “The correct poverty lines are more than double the official ones and applying them shows that the percentages of poor have not decreased but have risen particularly sharply during the period of market oriented reforms and emphasis on exports.”<sup>74</sup>

Continued liberalization and globalization worries many scholars because of how the global markets could negatively impact India. Mukherjee argues that becoming more reliant on inputs provided by international corporations is not renewable and further takes agriculture out of the farmer’s hands.<sup>75</sup> Especially in the wake of the global financial crisis of 2008, there are worries as to how the volatility of the world market will affect domestic prices of food. “Any attempt on the part of the country to equalize the domestic prices of foodgrains with world prices

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<sup>72</sup> SAPRIN The Structural Adjustment Participatory Review International Network, *Structural Adjustment, The SAPRI Report: The Policy Roots of Economic Crisis, Poverty and Inequality* (New York, NY: Zed Books, 2004). 207.

<sup>73</sup> Fan, Gulati, and Dalafi, "Overview of Reforms and Development in China and India."

<sup>74</sup> Patnaik, "Origins of the Food Crisis in India and Developing Countries," 94.

<sup>75</sup> Mukherjee, *Hunger: Theory, Perspectives and Reality*.

and to export foodgrains of ordinary quality in response to the process of globalization may seriously jeopardize the already fragile state of food security in the country.”<sup>76</sup> Vandana Shiva, an environmental and social activist, believes that the perpetuation of liberalization policies is to blame for issues of starvation and farmer suicides in India today. “Today, all elements of India’s food security policy are being dismantled under the pressure of World Bank and WTO. Starvation is the inevitable result of policies promoting sudden withdrawal of the role of the state and reckless dependence on markets to bring food to the poor who have no purchasing power.”<sup>77</sup>

## Lessons from the Past

Both the Green Revolution and liberalization were sets of reforms pushed into implementation in the face of crises. In the case of the Green Revolution, “The political economy of food compelled our policy-makers to periodically look back to agriculture, whenever the spectre of hunger loomed large or donors (under PL 480) twisted our arms.”<sup>78</sup> The macro nature of these crises then led to macro-reforms, focused on short-term successes without taking into account the long-term effects. Vyas called India’s historical reforms “big bang reform processes.”<sup>79</sup> They were both moments of large-scale reform that faded out over time. Gulati calls the Green Revolution “short-lived” because even though when it first began its successes outweighed its failures, today, many policies introduced during this period continue despite their

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<sup>76</sup> B.L. Mungekar, "Foodgrain Production, Prices and Rural Poverty in India," in *Reforming India's Social Sector: Poverty, Nutrition, Health & Education*, ed. K. Seeta Prabhu and R. Sudarshan (New Delhi, India: Social Science Press, 2002), 142.

<sup>77</sup> Vandana Shiva, "Starvation Deaths, Overflowing Godowns: How Globalisation is Robbing the Indian People of Food," in *Sustainable Agriculture and Food Security: The Impact of Globalisation*, ed. Vandana Shiva and Gitanjali Bedi (Thousand Oaks, CA: Sage Publications Inc, 2002), 456.

<sup>78</sup> Gulati, "Indian Agriculture in an Open Economy: Will it Prosper?," 123.

<sup>79</sup> *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*: 280.

negative side-effects. “The green revolution started graying in the late 1970s, but the new rice seeds and positive price policy for rice gave it a new lease of life. Thereafter, since the 1980s, it is surviving on an increasing dosage of input subsidies, creating large price distortions, bankrupting the input supplying agencies, and placing an unsustainable financial burden on the exchequer.”<sup>80</sup> During liberalization, many scholars acknowledge the past “anti-agriculture” policies that occurred because industrialization was a higher priority. As will be shown later, many policymakers hesitated in implementing reforms, which can be seen in the government’s reluctance to embrace liberalization.

## ECONOMIC

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Economic policies play a central role in determining the food security of a nation because they help dictate adequate supply and accessibility of food, as well as the citizens’ ability to obtain food. The overall economic growth that India has experienced is important in increasing the entitlements of each of its citizens. Economic policy in the agricultural sector is probably the most important factor. Agricultural reforms effect every Indian since over half of the workforce belongs to this industry, and over half of the products in a consumer’s budget are agricultural ones. “Thus, changes in income, production, and productivity in agriculture are vital not only to the people directly dependent on this sector but also to the entire country.”<sup>81</sup>

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<sup>80</sup> Gulati, “Indian Agriculture in an Open Economy: Will it Prosper?,” 123.

<sup>81</sup> Vyas, “Market Reforms in Indian Agriculture: One Step Forward, Two Steps Back,” 264.

## Should India Continue Policies of Liberalization?

Even though the 1990s defined the main period of liberalization, continuation of reforms from this time as well as further opening up of Indian markets has kept the topic as one of strong debate. As discussed in the previous section, policymakers made some strides towards liberalization in the 1990s, but still maintained their “traditional closed approach to agricultural policy and the related self-sufficiency focus on foodgrains, which is no longer sustainable.”<sup>82</sup> Scholars still disagree on whether or not India should pursue more dramatic liberalization and focus on exports in the international market. Many of the arguments are still the same as those that evaluated the pros and cons of the 1990s reforms.

Rao promotes liberalization as a way in which to enhance food security. “India, like several other East and South-east Asian countries, has a comparative advantage in agriculture, so that there is considerable scope for raising farm income and employment by stepping up agro-based exports without jeopardizing, and indeed by consolidating, the food security already achieved.”<sup>83</sup> “The export potential of foodgrains will further strengthen food security at home, because exports can be adjusted up to a point, to ensure adequate availability of foodgrains for the domestic market.”<sup>84</sup>

If India follows the route of liberalization, supplemental reforms are still needed just like they were in the 1990s. The increase in domestic prices needs to be buffered with increases in the purchasing power of the poor via employment.<sup>85</sup> The government needs to improve its capacity

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<sup>82</sup> *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*: 236.

<sup>83</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 35.

<sup>84</sup> *Ibid.*, 36.

<sup>85</sup> *Ibid.*

to support agriculture through public investment and promoting proper utilization of resources.<sup>86</sup> This support is especially important at the state level, who will receive much of the financial burden that may come with further liberalization. "It has been pointed out that freer trade will raise the average level of agricultural prices, especially prices of basic foodgrains like rice and wheat, and that these increases, compounded by the reduction of food and fertilizer subsidies in the central budget, will widen the gap between producer prices and prices to consumers, both under PDS and in the open market."<sup>87</sup>

Along with other types of economic reform, the fact that food security is a multi-pronged issue on many different fronts still remains. "It follows that the issue of food security and hunger cannot be seen as merely economic issues. The questions of food security and hunger have to be viewed as the major livelihood issues confronting the nation."<sup>88</sup> But when looking at economic policy, policymakers need to see beyond trade and liberalization and create solutions that will increase the entitlements and capacity of those who are food insecure. One of the problems with relying on trade is that, "'gains from increased allocative efficiency consequent on free trade in general and trade liberalization in agriculture in particular are marginal' and 'trade policy, like price policy, and other policies which rely on market mechanism, are not very effective in bringing food to the poor. They will provide food to those who have money to buy it but not to those who lack purchasing power.'"<sup>89</sup>

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<sup>86</sup> Ibid.

<sup>87</sup> S. Guhan, *India's Development Experience: Selected Writings of S. Guhan* (New York, NY: Oxford University Press, 2001). 155.

<sup>88</sup> Amitava Mukherjee, "International Trade and Food Security in India," in *Sustainable Agriculture and Food Security: The Impact of Globalisation*, ed. Vandana Shiva and Gitanjali Bedi (Thousand Oaks, CA: Sage Publications Inc, 2002), 322.

<sup>89</sup> Dantwala, *Dilemmas of Growth: The Indian Experience*: 284.

## Adverse Impacts of Economic Policies on Food Security

### Landless Farmers

Much of India's rural workers who depend on agriculture are landless farmers. Vyas defines the Indian agrarian structure as "small-scale agriculture in which large numbers of farmers have almost no marketable surplus."<sup>90</sup> The production base that these landless farmers have to work with has reached its limit. There is no more land to expand upon and land and water investments are both low, making these resources inadequate in some areas.<sup>91</sup>

In *The Dragon and The Elephant*, comparisons made between the experiences of China and India included observations that the high number of landless farmers in India helps keep poverty, and thus food security, high as well. "Fairly equal access to agricultural land made the poverty reduction elasticity of agricultural growth much larger in China than in India."<sup>92</sup> The type of government in China is able to provide more equal access to arable land amongst citizens because land reform is more centrally controlled. India's democracy is not able to provide such equitable distribution in the same way, but could, regardless, benefit from a more structured distribution of land. Ensuring that poorer villagers have land increases their capacity, as discussed in Sen's capacity-building theories, helping bring them out of poverty and increase their food security simultaneously. "Giving the poorest a stake in the land and improving their

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<sup>90</sup> Vyas, "Market Reforms in Indian Agriculture: One Step Forward, Two Steps Back," 265.

<sup>91</sup> Ibid.

<sup>92</sup> Fan and Thorat, "Public Investment, Growth, and Poverty Reduction: A Comparative Analysis of India and China," 137.

consumption standards also enables them to invest in their future.”<sup>93</sup> Providing a more equitable distribution of land would shift the balance of political and economic power away from big landholders.

### Decline in Food Demand

Food prices have risen in accord with rising prices internationally, peaking during the 2008 global financial crisis. Increases in MSPs pressured policymakers to increase issue prices, as they were faced with the stress of “financial ‘discipline’ coupled with a resource crunch.”<sup>94</sup> Higher food prices have contributed to a decrease in food demand. “The main reason for slackness in the demand for cereals is rising prices, especially PDS issue prices for the poor.”<sup>95</sup>

With increased unemployment and prices, “The statistics point to a severe compression of incomes and purchasing power for the majority of the population in India that more than canceled out the rise in demand on the part of the minority getting richer.”<sup>96</sup> Rao agrees and adds: “higher energy requirements of the rural poor due to heavy manual labor; payment of wages in kind by the large farmers in the form of cooked food; [and] the poor state of health and environment resulting in low efficiency of conversion of food into energy,”<sup>97</sup> to the list of causes in the demand decline. In the 1980s and 1990s, non-cereal food commodities grew faster than wheat and rice, while cereal production plateaued.<sup>98</sup> “The poor’s preference for variety in

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<sup>93</sup> Ravi Srivastava, N.C. Saxena, and Sukhadeo K. Thorat, “Land Institutions, Policy, and Reforms in India,” in *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*, ed. Ashok Gulati and Shenggen Fan (Baltimore, MD: The Johns Hopkins University Press, 2007), 77.

<sup>94</sup> Vyas, “Market Reforms in Indian Agriculture: One Step Forward, Two Steps Back,” 269.

<sup>95</sup> *Ibid.*, 266.

<sup>96</sup> Patnaik, “Origins of the Food Crisis in India and Developing Countries,” 91.

<sup>97</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 126.

<sup>98</sup> Vyas, “Market Reforms in Indian Agriculture: One Step Forward, Two Steps Back.”

consumption over their nutrient content is another reason for the decline in cereal consumption.”<sup>99</sup> “The diversification of the consumption basket has been at the cost of calorie intake.”<sup>100</sup> The decline in demand shows that the food insecure are eating less, when they should be eating more. They face an increasing lack of entitlements due to higher prices, making them even more food insecure.

## High Costs

### *Minimum Support Price*

The minimum support price (MSP) is a tool used to stabilize prices of agricultural commodities. It is the minimum or floor price at which farmers can sell their goods, which are guaranteed to receive. It is only set for certain commodities, which the government assures that it will buy at the MSP if the market price falls below this level in post-harvest.<sup>101</sup> MSPs are recommended by the Commission for Agricultural Costs and Prices (CACP) using the cost of cultivation, availability of grains, and a check for inflation in its calculation.<sup>102</sup> While the MSP does protect farmers from price fluctuations, it has had many negative impacts as well. A few problems with its implementation are that it is declared late, its only applicable to a few staple foods, and it is mostly based on wholesale prices, of which farmers get very little.<sup>103</sup>

The procurement price is the price at which the government will buy foodgrains from producers, so it is basically the same as the MSP. The minimal amount of differentiation between

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<sup>99</sup> Suryanarayana, "Nutrition Security in India: Issues and Policies," 175.

<sup>100</sup> Ibid., 176.

<sup>101</sup> Vyas, "Market Reforms in Indian Agriculture: One Step Forward, Two Steps Back."

<sup>102</sup> Jha, Srinivasan, and Ganesh-Kumar, "Achieving Food Security in a Cost-Effective Way: Implications of Domestic Deregulation and Liberalized Trade in India," 55.

<sup>103</sup> Gahukar, "Food Security in India: The Challenge of Food Production and Distribution," 278.

MSPs and procurement prices makes procurement and distribution, especially within the PDS, more difficult. MSPs have risen, increasing prices of food goods. "With higher MSPs there is a significant worsening of the welfare of 80 percent of the population in rural areas and of all urban dwellers,"<sup>104</sup> as mentioned earlier due to a decline in entitlements. The rise in the MSP is occurred because there has been a crowding out of private sector buyers of foodgrains by the government and a decreased demand for these goods.<sup>105</sup>

MSPs favor regions and farmers with marketable surpluses, which, is not the majority of agricultural producers. Therefore, this form of price stabilization creates inequality between farmers as well as preference over some types of crops. "The policy has led to huge foodgrain stocks, which are difficult to dispose of, and prioritizing cereals and few other crops as key to food security has gotten in the way of diversification of agriculture."<sup>106</sup>

### *Input Subsidies*

Indian agriculture came to rely strongly on input subsidies during the 1960s, as they were key in implementation of the Green Revolution. Since then, reliance on inputs, fertilizers, and pesticides has increased, but productivity has slowed. Especially because most Indian agricultural producers are poor, cheap input subsidies with fertilizers, electric power, and irrigation water have been important components of policymaking. "It is clear not only that the subsidy bill for all three inputs is increasing but that it accounts for a progressively rising share in government revenues, the value of agricultural output, and GDP."<sup>107</sup> "Food and agricultural

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<sup>104</sup> Hoda and Sekhar, "Agricultural Trade Liberalization, Poverty, and Food Security: The Indian Experience," 454.

<sup>105</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*.

<sup>106</sup> Vyas, "Market Reforms in Indian Agriculture: One Step Forward, Two Steps Back," 276.

<sup>107</sup> *Ibid.*, 268.

subsidies have contributed to increasing the fiscal deficit and crowded out public investment in agriculture.”<sup>108</sup>

Input subsidies have also been shown to have a negative correlation with agricultural productivity. In an effort to give income support to agricultural producers, these subsidies have failed, leading to adverse political and developmental implications. They have also created more income inequality because the distribution of subsidies favors certain areas and situations. Subsidies decrease incentives to raise productivity and to conduct research or build rural infrastructure.<sup>109</sup>

The protection provided by these interventionist policies in the Indian economy has now been out-weighed by their costs incurred by the government and farmers. “The time has come to seriously think about dismantling the ‘high-cost, high-subsidy’ regime, which is not only not contributing to the increase in productivity but also eating into the vital parts of the agricultural economy by diverting resources from rural investment.”<sup>110</sup>

## **Urban Bias**

In response to criticisms saying that farm prices were held down by the government through zonal restrictions and imports of foodgrains, M.L. Dantwala says that “policy-makers in India have kept food prices high and displayed a big farmer and anti-urban and anti-poor bias.”<sup>111</sup>

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<sup>108</sup> Hoda and Sekhar, "Agricultural Trade Liberalization, Poverty, and Food Security: The Indian Experience," 323.

<sup>109</sup> Vyas, "Market Reforms in Indian Agriculture: One Step Forward, Two Steps Back," 275.

<sup>110</sup> Ibid., 276.

<sup>111</sup> Dantwala, *Dilemmas of Growth: The Indian Experience*: 97.

Utsa Patnaik argues that the diversion of foodgrains to feed livestock rather than people has contributed to food insecurity. This practice, he says, is anti-poor because it's wealthier people who demand animal products when what the rural poor really need are foodgrains.<sup>112</sup> "Within a given developing country, the middle- and high-income classes are able to corner the bulk of domestically consumed grain with a rising share for indirect use, while the low-income classes are deprived of even sufficient direct consumption to meet minimum needs."<sup>113</sup> There are criticisms to this claim, saying that non-foodgrain production, such as dairying, is not anti-poor because it opens up job opportunities in rural areas. "A shift toward dairying, within reasonable limits, is likely to promote both nutrition and employment."<sup>114</sup>

## **Policy Suggestions**

To reduce the negative impacts of economic policies on food security, reforms need to focus on reducing costs and the burden of those costs on the poor. Policymakers should take a second look at MSPs and subsidies to re-evaluate their effectiveness in today's political economy. Continued overall economic growth in India will, if it trickles down, help increase the entitlements of its citizens and therefore their ability to obtain food. Taking a note from China's experience, growth in the agriculture can also simultaneously improve the nonfarm sectors.

Increased public investment will help provide supplemental programs and policies to aid development, especially that of the rural poor. "Among the categories of investment, agricultural research, education, and rural infrastructure are found to be the three in which public spending is

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<sup>112</sup> Patnaik, "Origins of the Food Crisis in India and Developing Countries."

<sup>113</sup> Ibid., 90.

<sup>114</sup> Dantwala, *Dilemmas of Growth: The Indian Experience*: 99.

most effective in promoting agricultural growth and poverty reduction in both countries. This implies that there is a great deal of potential for more growth and poverty reduction if the level of public investments in these categories is raised.”<sup>115</sup> Land reform in order to address the needs of landless farmers must be included in agricultural policy. Lastly, stabilizing food prices, especially in recovery from the 2008 financial crisis, should remain as an important focus of economic and agricultural policy.

## POLITICAL

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A substantial factor behind reforms’ inability to truly address food security lies in poor planning and implementation on the part of political actors. “The failure of agricultural strategy – and its economic policy content – to make any impact on rural poverty and unemployment or equitably distribute the gains from technological change has been variously attributed to socio-political factors such as the lack of political will, the elitist composition of political leadership and bureaucracy – no less than that of its critics – structural inequalities in the ownership of land and other assets, a bias in favor of big farmers, etc.”<sup>116</sup>

As we have seen when looking at historical and economic factors contributing to food insecurity, the idea of self-sufficiency has been persistent despite strong arguments against it.

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<sup>115</sup> Fan and Thorat, "Public Investment, Growth, and Poverty Reduction: A Comparative Analysis of India and China," 138.

<sup>116</sup> Dantwala, *Dilemmas of Growth: The Indian Experience*: 112.

With such a one-track idea of how policy should affect agriculture and food production, policymakers have been reluctant to try any drastic reforms.

Shaping agricultural policy does drive much of the political efforts in obtaining food security, and the dramatic increase in food supply since the 1960s was a big step in the right direction. “While there has been no problem with physical availability – in fact, there has been a glut in domestic supplies of foodgrains in the recent past – government programs to provide economic access to food are still evolving.”<sup>117</sup>

## **Policymaking Drivers Which Hinder Food Security**

### **Interest Groups and Political Lobbying**

Constituencies who benefitted from policies implemented during liberalization, such as subsidies and MSPs, have kept subsequent reforms that reverse with these policies, in order to increase food security, from being implemented. The continuation of these policies has increased the government deficit and contributed to the large foodgrain surpluses. “Lavish MSPs paid to producers encouraged excessive grain procurement and stocks, resulting in higher storage and transport costs for the government. Increasing the handling cost of the stockpiles in turn forced a rise in PDS prices, which hit the poorer consumers.”<sup>118</sup> The influence of farm lobbies has led to the inflation of the MSP, and therefore issue prices. Big wheat and rice farmers drive much of the agricultural policy, effecting, especially, the type of foodgrains available in the PDS. “Consequently, no attempt has been made to extend the coverage to PDS to other crops and

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<sup>117</sup> Hoda and Sekhar, "Agricultural Trade Liberalization, Poverty, and Food Security: The Indian Experience," 322.

<sup>118</sup> Fan, Gulati, and Dalafi, "Overview of Reforms and Development in China and India," 40.

coarse cereals like jowar and bajra and the required back up of R&D has not come about in these crops except at the margin.”<sup>119</sup>

Subsidies are some of the most effective policies in creating interest groups because their direct benefits are only felt by specific, targeted people. This strengthening of political lobbies can especially be seen in the case of input subsidies. “Part of the subsidies are going to inefficient input producers (fertilizer plants) and suppliers (canal authorities and electricity boards) who have vested interests in perpetuating subsidies and concealing inefficiencies in the production and supply of inputs.”<sup>120</sup> Policymakers developed subsidies and other such policies with good intentions, in order to aid and protect agricultural producers; however, with changing circumstances since their implementation, they have become ineffective and created more problems.

### **Lack of Initiative or Implementation of Effective Policies**

Interest groups make policymakers wary of implementing reforms that may work against these constituencies. “In a democracy where more than two-thirds of the electorate has its roots in agriculture, reducing domestic support for farming is always a daunting task for governments.”<sup>121</sup> Even when committees or groups are formed to explore negative effects that current policies have on food security, they have failed to implement substantial changes. In the case of the agricultural research system in India, such issues have undermined the potential contributions of new technology. “Lack of effective policy dialogue and interaction is emerging

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<sup>119</sup> Mukherjee, *Hunger: Theory, Perspectives and Reality*: 279.

<sup>120</sup> Vyas, "Market Reforms in Indian Agriculture: One Step Forward, Two Steps Back," 275.

<sup>121</sup> Hoda and Sekhar, "Agricultural Trade Liberalization, Poverty, and Food Security: The Indian Experience," 303.

as a constraint confronting NARS [National Agricultural Research System] at the policy level.”<sup>122</sup>

When making observations on the reform process, Gulati and Fan noticed that India's process was much slower and complex than China's because of its “debate-style” democracy. Comparison of India's development experience with that of other Asian countries demonstrates the importance of political initiative and swiftness in action so that human development occurs alongside economic growth. In the case of Korea and China, their political economies “ensured that the trickle-down mechanisms were effective so that high growth resulted in the wider sharing of gains and speedy reduction in poverty. All this was possible because both countries displayed great political will and lent resolute state support in implementing their policies.”<sup>123</sup>

### **Policies Working Towards Food Security: Safety Net Programs**

As mentioned previously, one benefit of liberalization was that the government afterwards put more focus on developing safety net programs in order to prop up the poor and give them more entitlements. The most important of these programs, in relation to direct food security, has been the Public Distribution System (PDS), which will be discussed in more detail. The PDS was already in place when India implemented self-employment and wage programs in the 1980s.

This group of employment safety nets included the Integrated Rural Development Program, National Rural Employment Programs, and Rural Landless Employment Generation

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<sup>122</sup> Jha and Pal, "Agricultural Research and Technology in India: Status, Impact, and Contemporary Issues," 173.

<sup>123</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 57.

Program. Self-employment programs give the poor employable assets and credit to these assets, as well as provide job training. One such program is the Employment Guarantee Scheme, which guarantees work for a designated period of time for anyone who wants it. This program has indirect benefits by opening up employment opportunities that others may leave behind to participate in the EGS. Wage employment programs focused on hiring rural poor for public works labor. "The expansion of self-employment as well as wage-employment activities under the poverty alleviation programmes during the 1980s appear to have contributed significantly to the rise in agricultural wages by increasing the opportunities for off-farm employment."<sup>124</sup> This series of welfare reforms also included social security programs and gender-specific programs. Besides increasing entitlements, the Integrated Child Development Services (ICDS) addressed food security directly in the same vein as the PDS. The ICDS is a nutrition program serving children under six and pregnant women.

Initiation of safety net programs shows a big step in the right direction for Indian policymakers. However, reforms in each still need to be made. In regards to the ICDS, the World Bank found problems in "delivery, quality, and coordination."<sup>125</sup> Some actors have also played a part in restricting the possible impact of these developmental programs. Poverty and food insecurity still remain despite these efforts because of "the economic and political power structure which has vested interests in maintaining the status quo."<sup>126</sup>

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<sup>124</sup> Ibid., 197.

<sup>125</sup> G.K. Chadha, "The Rural Nonfarm Sector in the Indian Economy: Growth, Challenges, and Future Direction," in *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*, ed. Ashok Gulati and Shenggen Fan (Baltimore, MD: The Johns Hopkins University Press, 2007), 449.

<sup>126</sup> Dantwala, *Dilemmas of Growth: The Indian Experience*: 145.

## The Public Distribution System (PDS)

### Background

The Public Distribution System is a government procurement and distribution system of food commodities. “It ensures the availability of essential commodities such as rice, wheat, edible oils, and kerosene at below-market prices through a network of outlets or fair price shops.”<sup>127</sup> The program arose after WWII in response to the Bengal Famine of 1943. In the beginning, it solely focused on urban areas and depended on food imports for distribution. The system’s main goal was to be a mechanism for price stabilization. Since then, the focus of the PDS has changed to being more pro-poor. “Two principal aims of PDS are to maintain the minimum nutritional status of the population and insulating the poor from the impact of food price increases.”<sup>128</sup>

After 1960, the government set up the Agricultural Prices Commission and the Food Corporation of India (FCI) to provide more central organization to the system. The FCI is responsible for foodgrain procurement, storage, transportation, and distribution. “It is essentially a system of open-ended procurement: the FCI is obligated to buy all the grains that farmers offer to sell at the prescribed procurement price, as long as the grains meet a certain quality standard.”<sup>129</sup> From 1978 to 1991 the PDS expanded to rural areas, and in 1992 the Revamped PDS (RPDS) focused on serving households in tribal, hill, and arid areas with poor infrastructure.

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<sup>127</sup> Chadha, "The Rural Nonfarm Sector in the Indian Economy: Growth, Challenges, and Future Direction," 444.

<sup>128</sup> Mukerjee, *Structural Adjustment Programme and Food Security*: 79.

<sup>129</sup> Jha, Srinivasan, and Ganesh-Kumar, "Achieving Food Security in a Cost-Effective Way: Implications of Domestic Deregulation and Liberalized Trade in India," 51.

The most recent reform occurred in 1997 when the Targeted Public Distribution System (TPDS) replaced universal distribution. Targeting focused on those considered as living below the poverty line (BPL), giving them the greatest subsidized grains, and distributing grains at prices closer to market value to those above the poverty line (APL). “Until the introduction of the TPDS, the criteria for allocations were not explicitly stated, and a series of considerations, including the historical allocation patterns, foodgrain availability, and prices in various states, determined the state-wise allocations of grains by the government from the central pool.”<sup>130</sup> The APL/BPL division is under the discretion of the central government, while the physical distribution of PDS goods is the responsibility of the states. Through targeting, the government intended to limit the number leakages from the system and make it more pro-poor. Policymakers also hoped to reduce the cost of its maintenance by narrowing the scope of the program. Overall, the PDS has been successful at preventing large-scale famine and local food shortages by providing buffer stocks and a regulated method of food distribution. It is also more pro-poor than many of the other safety net programs.

## Problems

### *Targeted PDS excludes those in need through ineffective targeting*

The targeting of the PDS has been heavily criticized because, it has been shown to exclude those in need from its benefits. The split between BPL and APL ration card holders has been determined flawed by many academics who disagree with the official method of calculating the poverty line, via the consumer price index. “This procedure does not capture the actual spending rise required to meet the nutritional standard as the economic environment changes

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<sup>130</sup> Chadha, "The Rural Nonfarm Sector in the Indian Economy: Growth, Challenges, and Future Direction," 444.

over time. It leads to cumulative underestimation of the poverty line. ... it has produced absurdly low current official poverty lines, for rural India 356 rupees per month for 2005. This is below 12 rupees per day (about 26 U.S. cents), which would not have bought even one kilogram of open market rice.”<sup>131</sup> Many academics call this line and the BPL/APL division “arbitrary” or “artificial.” Vandana Shiva says that “the whole exercise of targeting the BPL families was exposed as a farce when 12 states informed the Supreme Court that they could not identify people in the BPL category.”<sup>132</sup>

Even though the central government sets the limits based on their poverty estimates, implementation of targeting “depends very much on the state governments’ willingness and ability to identify the poor perfectly.”<sup>133</sup> The differing degrees of focus on this aspect of the PDS across regions then leads to an unequal distribution of benefits.

A notable decrease in the usage of the PDS has occurred since its targeting, despite increases in population and maintenance of high poverty. “PDS off-take under the new regime declined from 19.6 million tones in 1996/97 to an annual average of 17.5 million tons during 1997-2000.”<sup>134</sup>

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<sup>131</sup> Patnaik, "Origins of the Food Crisis in India and Developing Countries," 94.

<sup>132</sup> Shiva, "Starvation Deaths, Overflowing Godowns: How Globalisation is Robbing the Indian People of Food," 459.

<sup>133</sup> Shikha Jha and P.V. Srinivasan, "Targeting Food Subsidies," in *Reforming India's Social Sector: Poverty, Nutrition, Health & Education*, ed. K. Seeta Prabhu and R. Sudarshan (New Delhi, India: Social Science Press, 2002), 165.

<sup>134</sup> M.H. Suryanarayana and Dimitri Silva, "Poverty and Food Insecurity in India: A Disaggregated Regional Profile," in *India: Perspectives on Equitable Development*, ed. S. Mahendra Dev and N. Chandrasekhara Rao (New Delhi: Academic Foundation, 2009), 218.

### *Ineffective in distribution of the surplus in foodgrains*

Since the Green Revolution, India has not had issues maintaining ample stocks of foodgrains. Recently though, these stocks have turned into unmanageable surpluses. “The Food Corporation of India (FCI) had, by 2002, accumulated over 60 million tons of foodgrains – nearly three times the normal requirement for buffer stocks and the public distribution system (PDS).”<sup>135</sup> Much of this surplus then became victim to the inadequacies of the FCI as a management institution, as it recently began to rot in foodgrain silos. “Due to inadequate facilities for storage and distribution of food grains, the FCI reported losses of 25-35%.”<sup>136</sup>

The surpluses are mostly in wheat and rice, commodities which the PDS focuses more heavily on because of political lobbying. The lack of diversification in PDS grains can then have a negative effect on the nutrition available to subsidized grain recipients. “Access to the PDS ‘tilts; cereal consumption away from coarse cereals towards wheat, without raising the level of cereal consumption.’”<sup>137</sup> Coarse cereals have higher nutritional value. The increase in non-foodgrain products available through the PDS has the same negative effect on nutrition, helping lead to the decline in demand for cereals, and therefore an increase in surpluses.

### *High maintenance costs*

The FCI has been criticized for its inefficient and costly operations. It remains relatively independent from the central government, therefore subject to little accountability. Yet, the institution receives financial support from the centre with “the knowledge that the government

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<sup>135</sup> Rao, *Agriculture, Food Security, Poverty, and Environment: Essays on post-reform India*: 137.

<sup>136</sup> Gahukar, "Food Security in India: The Challenge of Food Production and Distribution," 280.

<sup>137</sup> Reetika Khera, "India's Public Distribution System: Utilisation and Impact," *Journal of Development Studies* 47, no. 7 (2011): 1051.

will cover any costs.”<sup>138</sup> The high operation costs of the FCI alone “result in a high cost-benefit ratio for the PDS.”<sup>139</sup> In 1998, “the resources, both monetary and the quantity of cereals, required to provide food security through the PDS as it currently operates are way beyond all means at the disposal of the government.”<sup>140</sup> The government created the TPDS in an effort to eliminate this problem, but failed.

The storage and maintenance costs of grain stocks is severely draining on the government. “A large part of the government’s expenditure on account of food subsidy thus goes to cover up rising costs of the FCI rather than benefiting the consumer.”<sup>141</sup> High procurement and carrying costs ultimately mean a decline in the consumer’s share in food subsidies.<sup>142</sup>

The FCI’s costs outweigh its revenue. “The ‘food subsidy,’ paid by the government to the FCI, is determined by the gap between FCI’s ‘economic costs’ of procurement, storage, transport, and distribution and its revenue from grain sales to government welfare programs at the central issue price (CIP) as fixed by the government.”<sup>143</sup> This number has more than doubled from 2000-2010, meaning that the costs are just getting higher and the revenue is getting lower.

### *Leakages and corruption*

Leakages in the PDS occur when its benefits go to those who are not in need, whether through improper targeting or through sale of the subsidized grains on the open market.

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<sup>138</sup> Jha, Srinivasan, and Ganesh-Kumar, "Achieving Food Security in a Cost-Effective Way: Implications of Domestic Deregulation and Liberalized Trade in India," 62.

<sup>139</sup> Ibid.

<sup>140</sup> Parikh, "Food Security: Individual and National," 265.

<sup>141</sup> Jha and Srinivasan, "Targeting Food Subsidies," 151.

<sup>142</sup> Chadha, "The Rural Nonfarm Sector in the Indian Economy: Growth, Challenges, and Future Direction," 448.

<sup>143</sup> Jha, Srinivasan, and Ganesh-Kumar, "Achieving Food Security in a Cost-Effective Way: Implications of Domestic Deregulation and Liberalized Trade in India," 57.

Targeting has not only been criticized for excluding the needy, but also for including the already food secure. In states where targeting does not include calorie insecurity, “a comparison between estimates of incidence of poverty for 1993/94 and incidence of (per adult equivalent) calorie deficiency brings out that both in rural and urban India the size of the targeted population exceeded that of the (per adult equivalent) calorie deficient.”<sup>144</sup> These problems in targeting can also occur as an effect of illegal activities, such as obtaining bogus BPL ration cards.

Improper practices of the fair price shops and Indian bureaucracy have reduced the ability of even those in need to receive PDS benefits through the denial of ration cards. “Access is restricted not only by the official bureaucratic rules, but also by the unofficial procedures involving considerable waiting-time, additional financial costs, passing gatekeepers and brokerage.”<sup>145</sup>

Corruption is a huge problem in all facets of Indian politics and is a strong part of the political culture. The PDS is no exception. Corruption and malpractice on the part of different actors involved in the system is rampant. Jos Mooji conducted a study on the PDS in 1999, looking at its experience in Karnataka and Kerala. “In both states, card holders complained about black-marketeering, various other malpractices and low quality of rationed food.”<sup>146</sup>

Many ration shop owners that Mooji encountered were also involved in politics. “Locally influential people have often succeeded in getting command over PDS foodgrains and are able to reproduce or reinforce their dominant positions partly with the help of this PDS food.”<sup>147</sup> Ration

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<sup>144</sup> Suryanarayana and Silva, “Poverty and Food Insecurity in India: A Disaggregated Regional Profile,” 227.

<sup>145</sup> Jos Mooji, *Food Policy and the Indian State: The Public Distribution System in South India* (New Delhi, India: Oxford University Press, 1999). 145.

<sup>146</sup> *Ibid.*, 147.

<sup>147</sup> *Ibid.*, 156.

shop owners will use their leverage over constituents' access to food as a way to buy political support. Power can also be obtained through regulation institutions of the PDS, where individuals are responsible for issuing licenses to ration dealers. Bribes are especially important in relationships between licensers and grain producers, traders, and the government. Such a system reinforces patron-client relations and the culture of corruption.

The sale of subsidized grains on the open market, at a profit to the traders or fair price shop vendors, is a popular practice. "It has been estimated that more than a third of the quantity of subsidized wheat and rice gets sold in the market due to such leakages."<sup>148</sup> While conducting his study, Mooji heard a common mantra of fair price shop owners: "Through the front door we are making losses, but through the back door we are making profits."<sup>149</sup> "When PDS prices are much lower than market prices it means, on the one hand, that 'diverting' wheat from the PDS to the open market is particularly lucrative for PDS dealers."<sup>150</sup> Herein lies another problem, that if ration dealers were to conduct their shops legally, the profit they would make would be marginal in comparison to what they can get by selling grains on the open market. So, the behavior of the dealer is not solely to blame because the system is flawed in its operations at a higher level.

## **Policy Suggestions**

### **Decentralization**

Decentralized programs could be more effective at correctly targeting those in need as well as limiting leakages from the system. Putting the PDS under more control at the panchayat

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<sup>148</sup> Guhan, *India's Development Experience: Selected Writings of S. Guhan*: 159.

<sup>149</sup> Mooji, *Food Policy and the Indian State: The Public Distribution System in South India*: 152.

<sup>150</sup> Khera, "India's Public Distribution System: Utilisation and Impact," 1053.

and village levels could help address specific needs of different areas. Allowing the private sector to take more of a role in the distribution and storage aspects may increase the cost-efficiency of the PDS. “Despite evidence of lower trading margins and storage costs for private traders, the government continues to maintain several restrictions on them.”<sup>151</sup> Both of these policy reforms would help make the PDS more cost-effective. “Decentralized procurement and allowing a greater role for the private sector would moreover be likely to reduce overall costs and improve efficiency in the foodgrains markets.”<sup>152</sup>

### **Food stamps**

A food stamps program has been suggested by many academics as a possible alternative to the PDS. Maintenance costs would decrease drastically because procurement and distribution of grains would not be under the responsibility of the government. The now subsidized food commodities would be sold on the open market, giving people a wider choice of what to purchase with their entitlements and reducing the amount of leakages. However, this position would face opposition from those in power and those who have jobs through the FCI, some departments of states, private wholesale dealers, retail ration dealers, and cooperative societies.<sup>153</sup>

### **Increase the importance of accompanying employment programs**

Long-term food security can only be truly realized by implementing reforms and programs that will enhance the purchasing power and, therefore, the capacity of the food

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<sup>151</sup> Jha, Srinivasan, and Ganesh-Kumar, "Achieving Food Security in a Cost-Effective Way: Implications of Domestic Deregulation and Liberalized Trade in India," 64.

<sup>152</sup> Ibid., 48.

<sup>153</sup> Mooji, *Food Policy and the Indian State: The Public Distribution System in South India*.

insecure. Reform and expansion of employment programs, as well as improved education, should accompany any direct efforts, like the PDS, to improve food security. A combination of development programs can help increase the diversification of exchange entitlements as options for obtaining food.

With employment and other development programs, the political participation of those who are food insecure or formally food insecure will increase and help shape policymaking toward pro-poor reforms. “In order to increase the potential effectiveness of popular participation, it is important not to isolate food policy from other policy fields.”<sup>154</sup>

## Conclusion

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Even though India is in a dire situation with the amount food insecure people living on the subcontinent, there have been some steps in the right direction since Independence. The Green Revolution, liberalization, and safety net programs developed in this time period have made positive impacts on food security, as well as poverty. However, from the analysis of historical, economic, and political factors, there are trends and lessons that emerge through which India can form more effective policies in the future.

The Green Revolution, liberalization of the 1990s, and the PDS all came to be in the face of crisis. Policymakers in India are only stirred into action when the need is most dire. The problem then arises that preventative policy which would take into account long-term impacts does not define the type of reforms made in efforts to curb food insecurity. Instead, India has

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<sup>154</sup> Ibid., 253.

enacted several policies which only have strong benefits in the short-term, that then fade away as time passes or turn against the policy's goals.

One of the reasons behind these types of crisis reforms is the fact that Indian policymakers take little initiative to embrace or enact changes in policy which may anger some constituents. The nature of India's large bureaucracy and debate-style democracy means that there are many vested interests on every side of the aisle. Politicians need to refocus their efforts on the large amount of Indians who are food insecure, and make food security a top priority, instead of only being pushed into reforms via crisis. New programs or government efforts need to be pro-poor and pro-food insecure to ensure that this problem does not remain persistent for another 60+ years. This change in attitude can also apply to better implementation of policies already in place by finding ways to make institutions and operations more cost-effective. Counteracting a culture of corruption and political lobbying will contribute to this goal.

Finally, a point that has been emphasized repeatedly is that food security is a multi-pronged issue which requires a multi-pronged approach. Any reforms made towards food security must include supplemental policies and programs that address the food, economic, social, and overall development needs of the food insecure in India. If one facet is forgotten or not accounted for, then the effectiveness of such proposed reforms will decline.

Food security is a bigger issue beyond just providing a basic human need and right. It is an integral part of human development. Hunger and development have cyclical impacts on one another. "Because the poor are undernourished they fail to convert their full potential labor power to actual labor power. Because the conversion of potential labor power into actual labor power is inadequate for the poor, their capacity to obtain food to improve their nutritional status

is also low.”<sup>155</sup> This example of labor power also contributes to the argument that food security solutions must address many different needs – development needs. In order to erase food insecurity altogether, basically all human development goals will need to be met. Increased human development will improve the economies, governments, and societies of its people by promoting peace and equality.

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<sup>155</sup> Mukherjee, *Hunger: Theory, Perspectives and Reality*: 244.

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