

To remedy the prevailing problems, there are many areas that need to be addressed. Policy changes that are likely to positively impact the issues of deficits and moral hazard, and foster sustainability in the pension system include:

1. Insufficient revenue collection is assigned at local levels; approximately 70 percent of budgetary spending is at three local levels, compared to an average of 13 percent for other developing countries and 35 percent for developed countries. This compares to less than 50 percent of fiscal revenues accruing to local governments. Furthermore, an estimated 20 percent of GDP is raised informally by the public sector, including disguised public spending, often in the form of spending by banks directed by the Central Government. This implies that unless certain public services are paid for and micromanaged by the Central Government, accrual of arrears is inevitable. As such, the formal revenue system in China is weak and in need of reform. (Wong 2005)
2. The lack of a consistent, nation-wide pension scheme means benefits from pooling remain largely untapped. Local authorities in regions that may have a *de facto* surplus on their pension accounts often choose to lower the contribution rates of enterprises and individuals. With a nation-wide scheme of accounts, resources could be pooled such that surpluses in one region plug the deficits in other regions. (Dunaway and Arora 2007) Instead, the present system has fostered geographical discrepancies that often track pre-existing income inequalities, thus exacerbating regional inequity. Given the importance of positive externalities from a well-functioning pension system, these discrepancies also promote growth in already privileged regions whilst discouraging growth prospects in low-income areas as private individuals must self-insure. Introducing a system for national pooling would also reduce the implicit liabilities of Central Government, thereby improving budgetary consistency and reducing the need for extra-budgetary bailouts.
3. To achieve the above, local discretion in interpretation and implementation of the pension framework must be curbed. A stricter legal framework for pensions coupled with greater oversight of pension accounts and budget allocations by central authorities is therefore needed.
4. To remedy the problems of adequate contributions, the National Tax Bureau should administer collection. Since pension contributions are to be shared by local and central pension authorities (if budgetary reform according to the above pooling recommendations is implemented), it is appropriate that the agent responsible for collecting shared taxes such as personal and enterprise income tax also collected pension contribution. This would also increase efficiency in collection, since contributions are made by private individuals and enterprises based on their income.

References

- Asher, Mukul, Nicholas Barr, Peter Diamond, Edward Lim, and James Mirrlees. 2005. Social security reform in China: Issues and Options. Policy Study of the China Economic Research and Advisory Programme.
- Chinese National Bureau of Statistics. <http://www.stats.gov.cn/english>.
- Dunaway, Steven, and Vivek Arora. 2007. Pension Reform in China: The Need for a New Approach. IMF Working Paper.
- Fraschini, Angela. 2006. Fiscal Federalism in Big Developing Countries: China and India. POLIS Working Paper No. 66.
- Herschler, Stephen, B. 1995. The 1994 Tax Reform: The Center Strikes Back. *China Economic Review* 6 (2): 239-245.
- International Monetary Fund (IMF). 2006. People's Republic of China: 2006 Article IV Consultation. IMF Country Report 06/394.
- National Bureau of Statistics of China. Government of People's Republic of China. <http://www.stats.gov.cn/english>
- Wong, Christine C.P. and Richard M. Bird. 2005. China's Fiscal System: A Work in Progress. Georgia State University International Studies Program Working Paper 05-20.

INEFFICIENT PARASTATAL AGENCIES AND THE GROWING MODERN FOOD MARKET IN INDIA: THE NEED FOR PRIVATE PARTICIPATION

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The issue of food security is pivotal to the sustenance and growth of any economy. India's case in this respect has been particularly depressing. This article attempts to identify problems relating to food security in India, many of which can be attributed to government intervention in the food market through both its policies and agencies. In doing so, it also observes the ongoing trends in urban food markets and builds a case for increased private participation in Indian food sector.

The article begins by illustrating the alarming picture of food insecurity of India, using several quantitative parameters. Next, it shows that India actually does not suffer from shortage of food production. Therefore, in spite of being food-rich, India figures as one of the hungriest nations in the world. The article attempts to explore the causes of this food security paradox and shows how poor government policies implemented through parastatal agencies are to blame for the crisis. In doing so, several government policies that have intensified food security problems in the country are discussed and the need for their redesign is emphasised. One of the possible and efficient solutions, the article suggests, is to bring private players into the market.

The following part of the article reinforces the above suggestion. Today's food economy in India is rapidly transforming itself due to the changing food patterns and habits across growing urban India. By examining how the components and contents of the food supply chain have shifted, the article suggests the opportunity to improve food security by attracting private investments in the food industry, notably in food processing, cold chains and other allied infrastructure-demanding industries. Before concluding, suggestions for possible changes in the existing policy regime are enumerated.

Introduction

The issue of food security is pivotal for the sustainable growth of any economy. Although India has successfully embarked upon its journey of economic reforms over the last eighteen years, positioning itself as the world's fourth largest economy by purchasing power parity (Central Intelligence Agency 2010), continuing problems of persistent hunger, malnutrition, and food insecurity call for urgent attention from policy makers to carve out effective strategies in order to rectify the situation. For instance, between 1989 and 2005, per capita availability of food grains reduced from

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495 grams to 422 grams. (Saxena 2009) India has resolved to reduce hunger levels by half by 2015 as stated in the Millennium Development Goals (MDGs). But ongoing progress shows that the target is too ambitious. Amongst other things, India has a few serious problems. The government intervention in production, procurement and distribution of grains and foods has been massively inefficient, as shown in the paper. In addition, the government has not paid due attention to the rising modern food market channels, which have transformed the food habits of educated middle and upper class urban populations. Further, the structural imbalances of government policies have made it very difficult for household food security to be achieved. These structural imbalances result from ignoring the root causes of the problem and trying to fix the visible using quick-fix and myopic methods. Also, the imbalance emanates from indifference institutionalised in the system, where there is a gap between need and supply, compounded by over-staffing.

This article is divided into two broad parts. The first part discusses heavy government intervention in the Indian food sector, and how it is responsible for this sector's stunted growth. Part two explores the situation prevalent in increasing urban population's food habits and examines what possible policy steps can help allay the food insecurity fears that are present in the country.

Food security paradox in India

If one of the simplest definitions of food security is considered to be appropriate¹ – stating that food security is one's availability and access to food – India's situation is grim even when looking at the brightest view of the canvas. On 16th October, the World Food Day, ActionAid declared in a report that since mid 1990s, an additional 30 million people joined the ranks of the hungry and that 46 percent of children in India are underweight. (BBC 2009) Alarming as it may be, it does not come as a surprise to those living in India.

The problem of food insecurity is a paradoxical one. Although India does not have a deficit in food production, it is home to one of the largest hunger stricken populations in the world. To compound this paradox, the trade indicators for India show that net exports have exceeded net imports over the last decade. In July, 2002 the Food Corporation of India (FCI) had 63.1 million tonnes of food grain stocks (Patnaik 2003), which means total available stock had exceeded the total food requirements by about 20 million tonnes. This exceeded the requirements of food security by around 20 million tonnes and still above 200 million people were hungry and about 50 million on the edge of starvation. (Chakravarty and Dand 2005) Also, between 1998 and 2006 there was hardly any change in 47 percent of children (0-3 years old) being underweight. (Sinha 2009)

¹ Several definitions of Food Security exist. See for example, USAID's paper on "Policy Determination: Definition of Food Security" (1992). The definition used here is from World Bank.

Table 1 illustrates in particular the absolute and relative grading of where India stands with regards to food and agriculture, across the previous and latest decade for which data is collected. If we look at the agricultural import and export values, we notice that exports have always been higher than corresponding imports. Since agricultural trade is not contributed by food alone, I have recalculated the figures by adjusting them by the ratio of food export-import in total agricultural export-import and presented them in the same table. It does not show any remarkable change either. This essentially implies that the net trade value of agriculture (exports less imports) is positive.

Table 1: Agriculture and food export-import illustration for India

	Imports (US\$ million)				Exports (US\$ million)			
	1994-96	2004	2005	2006	1994-96	2004	2005	2006
Value of Agricultural Imports/Exports	2,212	5,124	5,360	7,067	4,861	7,058	9,020	11,265
Share of agricultural imports and exports in total imports and exports	6.46	4.85	3.58	3.90	15.45	8.84	8.71	9.05
Share of food in agricultural imports and exports	71.47	77.69	73.47	79.13	71.47	63.85	56.69	55.24
Value of Food Imports/Exports	1,581.2	3,981.2	3,938.6	5,591.9	3,474.6	4,506.7	5,113.4	6,222.3
Share of Food imports and exports in total imports and exports	4.62	3.77	2.63	3.09	11.04	5.64	4.94	5.00

Source: Computed by author from FAO, 2007-08

This is shown in Table 2, which also shows how India is markedly better placed in the import-export rubric when compared to other South Asian economies. Note that while net total trade is negative for India (and even other South Asian economies), it is remarkably positive for net agricultural trade. Clearly, India cannot be considered to suffer from a food deficit.

Table 2: Net total trade value and net agricultural trade value (Exports – Imports)

	Net Agricultural Trade (US\$ million)				
	1994-1996	1999-2001	2004	2005	2006
Bangladesh	-847	-1,619	-1,914	-1,887	-2,314
India	2,649	1,352	1,934	3,659	4,198
Nepal	-121	-151	-269	-258	-135
Pakistan	-993	-801	-954	-1,196	-1,450
Sri Lanka	29	215	217	389	-355

Source: Statistical Division FAO, 2009, Table 3: Global Hunger Index and its components in South Asian countries, across a decade

Even after this impressive show in food and agricultural trade, a World Food Program (WFP) study conducted in early 2009 noted that more than a quarter of world's hungry people live in India (230 million). (Sengupta 2009) China has sharply

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reduced malnutrition to around 7 percent of its children (under five years of age), compared to India's 42.5 percent. The Global Hunger Index (GHI)² ranks India a dismal 66th out of the 84 developing countries studied.

Look at Table 3 to assess the Indian problem from a comparative South Asian standpoint across a decade span. Notice that as far as (a) percentage of population undernourished, (b) percentage of children dying before five, and (c) GHI is concerned, India's improvement is better than only Pakistan's. While GHI of Bangladesh and Sri Lanka has improved by 31 and 35 percent respectively, India shows a mere 28 percent improvement. In almost the same period, when these countries have been able to reduce the percentage of undernourished population by 6-9 percent India has been able to reduce it by only about 3 percent. This shows the lackadaisical approach towards combating the problem of hunger in the country. India's low score and lack of improvement exhibit a depressing picture of an undernourished, underweight population, with distressingly high rates of infant mortality.

Table 3: Change in GHI (with its components) for South Asia in varying periods

	Undernourished population (%)		Change (%)	Underweight children under five (%)		Change (%)	Children dying before five (%)		GHI (on a scale of 0-40)		Change (%)	
	1990-92	2003-05		1988-92	2002-07		1990	2007	1990	2009		
	Bangladesh	36.0	27.0	25.0	56.5	41.0	27.4	15.1	6.1	59.6	35.9	24.7
India	24.0	21.0	12.5	59.5	43.5	26.9	11.7	7.2	38.5	31.7	23.9	24.6
Nepal	21.0	15.0	28.6	47.6	38.8	18.5	14.2	5.5	61.3	27.6	19.8	28.3
Pakistan	22.0	23.0	-4.5	39.0	31.0	20.5	13.2	9.0	31.8	24.7	21.0	15.0
Sri Lanka	27.0	21.0	22.2	33.2	18.1	45.5	3.2	2.1	34.4	21.1	13.7	35.1

Source: von Grebmer et al. (2008)

India's model presents a complex picture. We know India does suffer from food insecurity, from Global Hunger Index Report and other articles mentioned above. But looking at its Gross Domestic Product (GDP) per capita, it fares better than many of those countries which have a stronger position in the GHI (see Table 4). This means that while India's GDP per capita is higher, its GHI is low.

Table 4: GHI and GDP per capita

Country	GHI 2008	GDP per capita*
Nigeria	18.4	1977
Cameroon	18.7	2124
Kenya	19.9	1535
Sudan	20.5	2088
India	23.7	2753

*GDP in US\$ estimated at Purchasing Power Parity per capita

² GHI (von Grebmer et al. 2008) is a tool adapted and further developed by International Food Policy Research Institute, for describing the state of global hunger; and is based on proportions of (a) under five mortality rate, (b) prevalence of underweight in children and (c) proportion of undernourished.

Source: World Bank (2007)

So we have identified two baffling observations, (a) India does not have a food deficit, and (b) India's GDP per capita is better than many less hungry nations. Even then, India has a serious, rather alarming food security problem. Perhaps, it needs to be seen whether there is a difference between the amount of food grains produced and the amount that reaches the concerned population. Table 5 shows this dichotomy, and the next section attempts to identify the problem.

Table 5: Summary of annual per capita food grains output and availability in India in last decade

Three Year Periods	Average Population (million)	Net Output per head (grams/day)		Net Availability per head (grams/day)			Change in per capita Availability from 1991-92 (%)		
		Cereals	Food grains	Cereals	Pulses	Food grains	Cereals	Pulses	Food grains
1991-92	850.7	447.8	489.8	446.0	38.9	484.9			
1994-95	901.0	456.8	497.5	440.5	37.0	477.5	-1.23	-4.93	-1.53
1997-98	953.1	446.5	484.4	442.7	34.5	477.3	-0.74	-11.27	-1.58
2000-01	1008.1	451.6	486.9	415.6	31.5	447.1	-6.82	-19.01	-7.80
Individual Year									
2000-01	1027.0	432.3	458.7	387.5	26.4	413.9	-13.13	-32.11	-14.66
2001-02	1046.4	453.2	485.0	402.1	31.8	433.9	-9.85	-18.24	-10.53

Source: Ministry of Finance, Economic Survey for various years, supplemented by Reserve Bank of India, Report on Currency and Finance for various years, quoted in Patnaik (2004)

Where is our food?

An important take-away from the above discussion is that the problem is not *food production*, but *food availability*. While India has been food secure at the national level (Jha and Srinivasan 2004), the situation at the household level is appalling. This means, there is something in the transfer between the producers and consumers, which gobbles up part of what transits through it. This 'Great Indian Leakage' is the result of the massive Public Distribution System (PDS) of India.

India's food policy has aimed to stabilise grain prices and supplies over time and across regions by procuring grains from surplus areas and supplying them to deficit areas. (Jha and Srinivasan 2004) In the days of food shortages, this essentially meant heavy government intervention in pricing, stocking, marketing and distribution of food grains. Historically this made sense, but in today's world of cheaper modes of transport and easy access to communication technologies, public intervention has only become redundant. (Jha and Srinivasan 2004)

This interventionist approach by the government is carried out by the FCI, which is the principal parastatal agency, controlling nearly 50 percent of the grain markets. Its cost of operation (minus sales) is reimbursed by the government in the form of food subsidies. The figures are mind-boggling. Notice in Table 6 that in 1990-91, the total grain price subsidy plus buffer stock subsidy was 2.33 percent of total central government expenditure (US\$ 528 million). This increased to US\$ 3.5 billion

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(reaching 0.77 percent of GDP and 4.41 percent of government's expenditure in 2001-02) (see Table 6 for enormously mounting subsidies doled out to FCI by the government). In addition, government also provides financial assistance to states for godowns (warehouses) construction, purchase of trucks and vans, and for training, research and monitoring. (Jha and Srinivasan 2004) This expenditure was appropriate if FCI and its policies were efficient. Unfortunately, this is not so.

Table 6: Food subsidy of Government of India*

Year	Total price + Buffer stock subsidy (US\$ Billion)	Of which subsidy on buffer stock (US\$ Billion)	Buffer stock subsidy as % of total food subsidy	Rate of increase of the Price + Buffer stock subsidy (%)	Share in total GOI expenditure (%)	Share in GDP (%)
1990-91	1.42	0			2.33	0.48
1991-92	1.43	0		1.02	2.56	0.48
1992-93	0.97	0.16	16.11	-32.32	2.27	0.41
1993-94	1.65	0.39	23.96	69.79	3.90	0.70
1994-95	1.44	0.59	40.87	-12.20	2.80	0.49
1995-96	1.62	0.45	27.94	11.93	2.78	0.46
1996-97	1.51	0.22	14.77	-6.89	2.46	0.42
1997-98	2.09	0.26	12.49	39.06	3.23	0.54
1998-99	2.19	0.40	18.34	4.69	3.11	0.53
1999-00	2.15	0.44	20.59	-1.91	3.03	0.51
2000-01	2.34	0.97	41.37	8.98	2.88	0.53
2001-02	3.43	1.21	35.35	46.6	4.41	0.77

* For various years

Source: Recalculated from Jha and Srinivasan (2004)

A strong instrument in the hands of FCI is the Minimum Support Price (MSP) for 24 major crops. Although the MSP is supposed to take into account genuine economic factors, thereby protecting producers, in the past its determination has been influenced by political factors like the nexus between Chief Ministers and rich farmers' lobbies in surplus states. (Rao 2001) This has (a) increased the MSP enormously³, and (b) given strong incentives to farmers to switch from cereals, pulses, oilseeds (whose supply fell) to 'MSP crops'⁴, (whose supply increased so much that its demand fell considerably). In 2001-02, because of high MSP, the government was forced to buy and stock astronomical quantities of these crops. (Chand 2003) The FCI had led to a situation where their food stocks rose, while people in India were starving! It is no surprise that several researchers have expressed their disapproval of the way the MSP functions. (Parikh et al. 2003)

Another inefficient and expensive instrument in the hands of FCI is the Targeted Public Distribution System (TPDS), started in 1997. Its predecessor, the Universal Public Distribution System was heavily criticised for its failure to serve populations living below poverty line (BPL). (Dreze 2001; Dutta and Ramaswamy 2001; Shariff et

³ According to the Government of India (2001), the annual average increase in MSP of rice and wheat was higher than average inflation during 1992-93 to 1999-00.

⁴ This has happened especially in Punjab, one of the richest-farmers states in the country. (Jha and Srinivasan 2004)

al. 2002) TPDS mandated a 2-tier structure for families based on the level of their poverty. Special White Cards were given to people living BPL, and a Yellow Card to people above poverty line (APL). White Cards entitled 10 kg of food grains per family per month at subsidised rates.⁵ The Yellow Cards had no such subsidies.⁶ The procurement and distribution was executed by a plethora of hierarchies both at the Central and the State level executing agencies, adding to the confusion of arrays of implementation.⁷ Research has indicated that the PDS has been an expensive and poorly targeted social safety net program. (Rashid, Gulati and Cummings 2008)

The biggest failure has been the lack of effective identification of BPL families and issuance of ration cards to them.⁸ Other problems were intrinsic to the design of the scheme. Ten kilograms per family, and going by an average family size of five members, meant 2 kg per member per month. This is infinitesimally small compared to the recommended figure of 11.25 kg per person per month.⁹ Faulty design stemmed from working through disarranged indicators – population was based on March 2000 estimates, average size of the household by 1991 figures and poverty ratio of the states as in 1993-94. Added to this, there is evidence of high leakages in the programme too. (Jha and Srinivasan 2004)

Limited distribution to BPL coupled with inflated MSP, the stocks of food grains in the FCI posed serious cost implications. The government has since then revised its maximum allocation of food grains to BPL as well as APL families.¹⁰ In 2002, when the FCI stocks rose to an all-time-high of 63.5 million tonnes (much more than the capacity of godowns), and 250 million people were languishing in hunger, the government desperately increased the allocation of food grains to both BPL and APL families to 35 kg per month for one year. It also reduced the issue price for APL families, rice and wheat by US\$ 0.02 (Indian Rupees 1) per kg for three months. This did reduce the stock amount, but showed myopic policies and interventions on the part of government.¹¹

Traditionally the FCI purchased around 15 to 20 percent of India's wheat and 12 to 15 percent of its rice production. While this stock quantum has increased substantially (to the tune of seven times), the off take (sale) through distribution has

⁵ Set at half the economic costs of FCI.

⁶ The idea was to direct the benefits to 60 million BPL population.

⁷ The procurement is done by Central government, and distribution is the prerogative of respective state governments, which, in turn either provide additional subsidies on the centrally issued (already subsidised) prices, or impose an additional taxes.

⁸ In a three year period after introduction of TPDS, (1998 to 2001), BPL household cover increased marginally from 63.2 million to 65.2 million. By 1999, 18 states and Union Territories had not completed the process of identifying BPL. This resulted in 18 percent of deserving population not owning ration cards. (Jha and Srinivasan, 2004)

⁹ In fact GOI, 2002 estimated monthly requirement of 73 kg per family.

¹⁰ Government also introduced a discounted 70 percent of economic cost for allocation of food grains to APL families in 2001-02.

¹¹ There are however, some indications to show that while TPDS shows poor showing at national level, it did increase shares of food grains reaching poor states. (World Bank 2002)

not been proportional. (Jha and Srinivasan 2004) The degree of intervention has also increased. In wheat markets, FCI's market share increased from 4 percent in 1967-68 to 25 percent in 2004 and in the rice market, the corresponding increase has been from 9 percent to 22 percent. (Minten et al. 2009) In addition, the operating costs of FCI are unbearably high, which are again subsidised by the government of India, and increasing over the years. The mounting cost alone, in late 1990s was increasing at 15 percent per annum. This also accounts for the high cost-benefit ratio of the PDS. (Jha and Srinivasan 2001) The government has given sufficient autonomy without commensurate accountability to the FCI, which, coupled with the moral hazard problem¹² has made operations inefficient at high costs. (Gulati et al. 2000) Much of the procurement has been sold at heavy losses as cattle feed. (Jha and Srinivasan 2004) In spite of getting special treatment from the government,¹³ FCI has shown suboptimal performance. It is characterised by low capacity utilisation of warehouses, 70 percent higher storage costs in owned godowns compared to hired godowns, unscientific and inadequate storage, 10 to 15 percent higher marketing costs compared to private traders, development wages 4 to 5 times higher than market rates and finally, high leakage. (Jha and Srinivasan 2001)

Why the entry of private players makes sense?

The government has assumed that private players in food market can prove to be destabilising elements owing to a strong possibility of their "colluding and speculating behaviour". With this historical view, government has restricted¹⁴ their entry in the food sector by way of several inefficient policies and rules. This in turn has placed a heavier burden on the FCI, leading to high inefficiency and wastage.

However, several studies have indicated that private traders stabilise prices over time and across regions and if a favourable environment for them is created, they will bring overall gains to the social welfare in Indian economy. (Umali-Deininger and Deininger 2001) It has been established that private traders move grain from surplus to deficit areas and store grain from peak to lean season to take advantage of arbitrage benefits arising from price difference, thereby bringing spatial and time stability. (Jha and Srinivasan 2004) Private traders are able to operate at lower costs too (Jha and Srinivasan 2001) and even incur lower costs of storage, even when private players do not operate at level playing margins. Government has, unfortunately, failed to recognise the complementary role that private players can play in the food sector.

¹² The knowledge that government will cover the costs, if necessary, has made FCI complacent.

¹³ FCI get commercial borrowing rates 3-6 percent less than private traders. They get subsidised rail freight, and exemption from Selective Credit Controls.

¹⁴ Restrictions come in various forms. To note a few, under Essential Commodities Act, private traders cannot hold more than a certain amount of stock (so they cannot reap economies of scale), credit availability to private traders is heavily restricted, they require permits to operate outside one state (domestic trade is difficult), zonal restrictions, etc.

Labour, statutory, interest and administrative costs are a huge burden on the FCI. Surprisingly, the FCI exhibits diseconomies of scale despite the gigantic volume they deal with. Private traders on the other hand work on lower operating costs. Private traders buy directly from the farmers and thereby avoid *mandi* (wholesale) charges, unlike the FCI, which is mandated to buy from wholesale markets and has to pay those charges. Private traders employ innovative ideas to reduce costs, like using gunny bags more than once, carrying out transportation by trucks instead of trains, and keep the transit losses at a minimum.¹⁵ And above all, private traders get good quality produce because (a) they have business interest to buy only good quality grain, and (b) farmers themselves want to avoid levy on sale to FCI, sell good quality to private traders.

Moreover, the argument that private traders may collude and destabilise the price due to their speculative behaviour, is not robust enough. Studies have found (especially in Africa) that famines were averted because of private involvement to supplement government's efforts. (Drèze and Sen 1993) In fact there is little evidence that manipulation and speculation is a natural attraction for food markets in India. (Drèze 1990) There are however, certain specific instances when government's role is pivotal and essential. For example, during market failures or famines, private traders may take advantage of spatial arbitrage; and their intentions should be counter-influenced by public intervention.

Given the huge disparity in surplus and deficit areas in India, in terms of carrying cost, the FCI faces tremendous hurdles. Around a decade ago, it moved about 22 million tonnes of food grains over 1500 km. This amounts to around 12 million bags of food grains transported every month by road, railways and inland waterways. (Jha and Srinivasan 2004) Imagine the collection of wheat, 90 percent of which is concentrated in UP, Punjab, Haryana and Rajasthan (northern part of the country) and then transporting them to every corner of the country. This gives a tremendous scope to private players to enter and assist public distribution channels and ease the FCI's burden. But private players face heavy barriers to inter-state trade, in terms of terrible road infrastructure, archaic constitutional provisions¹⁶, practice of detention of vehicles at police check posts, requirement of permits (which is again saddled with numerous bureaucratic hassles) and complex paperwork.

A serious case for entry of private players in the food industry of India is built by carefully looking at the modern Indian food market. The next section discusses how changing patterns of food consumption in a growing Indian urban class have led to tremendous scope for private players to rope in their expertise and contribute to the

¹⁵ The rail freight subsidy is not given to private traders and their transportation costs form a major share of total costs. See for example, Jha and Srinivasan (2004).

¹⁶ Article 301 allows State legislature throughout the territory of India to impose such reasonable restrictions on the freedom of trade, commerce or intercourse with or within the State as may be required in the public interest. Article 304 provides for a state to impose, by law, any tax on goods imported from other states that is also imposed on goods produced in the state concerned.

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growing Indian economy by way of their transformative ideas of products and services in food industry.

The modern Indian food market

Over the past few years, food supply chains from rural producers to urban¹⁷ consumers have witnessed a dramatic change in most developing countries, and notably in India (and China). The food consumption is increasing and inclining from traditional staples towards more high valued products. (Pingali 2007; Gulati et al. 2007)

Table 7: Urbanisation in India

Census Year	Urban Population (million)	Urban population (%)
1961	78.93	17.97
1971	109.11	19.91
1981	159.46	23.34
1991	217.17	25.72
2001	286.20	28.54
2011*	354.94	29.92
2021*	429.61	32.20

*projected

Source: Government of India (2001)

**Table 8: Average value of expenditure of urban India
(per person per month)**

Year	Current Expenditure (US\$)			Real Expenditure (US\$)*		
	Food	Total	Food Expense (% of total)	Food	Total	Food Expense (% of total)
1972-73	5.10	7.92	64.47	11.90	19.90	59.78
1977-78	7.04	11.73	60.03	10.59	18.57	57.04
1983	9.90	16.75	59.10	10.82	19.58	55.25
1987-88	10.81	19.17	56.39	11.83	22.07	53.59
1993-94	7.97	14.57	54.70	11.95	23.41	51.04
1997	8.92	17.98	49.62	10.65	23.22	45.87
2000-01	8.63	20.01	43.10	11.00	26.24	41.92
2006-07	11.69	29.68	39.41	11.69	29.68	39.41

*deflated by average Consumer Price Index for industrial workers (Indiastat.com), with 100 = 2006-07; the Rupee exchange rate with US\$ is taken on 1st January of succeeding year

Source: National Sample Survey, various rounds, in Minten et al. (2009)

The urban food demand in India is driven mainly by increasing urbanisation (Table 7 shows how in 40 years, urban population percentage in India has increased from 17 to 29 percent), which in turn is dependent on various correlated factors, such as increasing income levels and poverty reduction. India has experienced strong GDP

¹⁷ According to Government of India (2001), among other things, an urban area should have (a) a minimum population of 5000, (b) at least 75 percent of male working population engaged in non-agricultural pursuits, and (c) population density of minimum 400 per sq. km. (1000 per sq. mile).

and income growth in the past few years and reducing poverty levels post liberalising its economy in 1991-92. Table 8 shows that the total (real) expenditure of urban Indians are increasing, reflecting the high economic growth and increasing income levels. Although the real expenditure on food has not increased much in the last 35 years, if we compare this with growth in the urban population in Table 7, we find a threefold increase in expenditure on food items too. Additionally, there has been an increased access to modern food-related technologies like microwave ovens, refrigerators etc., thereby altering the purchasing behaviour of urban consumers enabling them to stock processed food or other items which can be stored over longer periods of time.

These changes have led to differences in urban (as well as rural) food consumption baskets. Consumers who can afford to do so are shifting away from grains and choosing higher valued products like fruits and vegetables, dairy products, meat, fish etc. and more processed foods. This trend is illustrated by the fact that the share of cereals in total food expenditure has declined from 36 percent in 1972-73 to 24 percent in 2006-07 in urban areas and from 56 to 32 percent in rural areas. (Minten et al. 2009) Another important change seen is that of richer households switching to processed foods with the richest and poorest groups spending around 58 percent and 30 percent of their food budget into relatively highly processed foods respectively. (Minten et al. 2009) Table 9 illustrates the share of food budget in urban and rural India's food expenditure in 2004-05. It shows that there is a high demand in both urban and rural areas for processed food, which comes as a surprise especially for rural areas. It is only for second processed foods that rural India has yet to improve. Therefore, when income rises, consumption of processed foods gains importance.

Table 9: Indian food expenditures according to level of processing (%)

	Urban	Rural
Primary Products	16.8	15.3
First processing - low value added (0 - 5%)	34.8	43.9
First processing - low value added (5 - 15%)	38.2	35.1
Second Processing	10.2	5.7
Total	100	100

Source: Minten et al. (2009)

Traditional food supply chains in India, closely associated with the FCI, have been characterised by highly unorganised and disarrayed functional methodology. Government regulates agricultural sales through Agricultural Produce and Marketing Committee (APMCs) establishing large number of market yards.¹⁸ Typically, farmers bring their produce to these wholesale markets and to the shop of the broker whom they would like to transact with. The brokers – perfectly legal entities who charge some commission, also called commissioning agents – set out an

¹⁸ These wholesale markets in India totaled around 268 at the time of independence, and have reached around 6300 in 2007. (Chauhan 2008) There are also around 21,000 rural primary/temporary markets which supply the wholesale markets in urban centers.

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open-outcry auction, and prices are set. There have been studies illustrating that these markets are inefficient and highly wasteful (Matoo, Mishra and Narain 2007), ailed by trader collusion (Banerji and Meenakshi 2004), and extremely poor infrastructure. (Fafchamps, Vargas-Hill, and Minten 2008) APMC creates barriers to entry for newcomers, impedes innovation, prohibits farmers from buying outside the market area and increases the importance of bureaucrats. (Acharya 2004) These markets are regulated by Agricultural Produce and Marketing Act. The government is mindful of the problems in the Act and has therefore formulated an Amended Act, 2003. However, only 11 out of 28 states have amended the Act. (Chauhan 2008)

As a result of changing food patterns in urban India and dysfunctional traditional food supply chains, modern food marketing channels have emerged in last decade at a phenomenal pace in the country. Table 10 indicates growth in modern supply chains against food consumption in India. It is observed that modern private-sector-led growth is substantially higher than overall food expenditure growth. The table highlights growing importance of modern channels.

Table 10: Growth in modern food marketing channels versus food consumption in India

	Annual Growth Rate (%)	Unit	Period
Modern-public-sector-led			
Parastatal procurement	6.59	tonnes	1996-2006
Modern private-sector-led			
Modern food retail	65.50	real \$*	2001-08
Processing sector overall	6.75	real Rs.**	2002-06
Food service sector overall	9.20	real Rs.**	2001-06
Food Consumption			
Total urban food consumption	3.41	real Rs.***	1997-2006
Total food consumption (Rural + Urban)	2.47	real Rs.***	1997-2006

*deflated by urban consumer price index (CPI) (US Department of Labor)

**deflated by Reardon, Gulati and Minten (2008), referenced in source document

***deflated by CPI for industrial workers, India (Indiastat.com)

Source: Minten et al. (2009)

Modern retail food outlets, characterised by supermarkets, have shown high real growth rates of around 65 percent, yet it is currently a small player in terms of total food retail in India. In 2006-07, total food and grocery sale was valued at US\$ 191.6 billion (Joseph et al. 2008), of which the share of modern retail was only 3 to 5 percent. This supply chain merits special attention because large Indian players (Reliance and ITC, for example) – owing to their huge requirements which cannot be fulfilled by traditional wholesale markets – are looking forward to the setting up of collection centres where traditional market channels are bypassed. This will reduce the transaction costs heavily, and farmers will gain in the process. Another important feature is that these supermarkets act as outlets for most processed foods. Therefore, they are drivers of food processing sector's success. So a rise in

supermarkets has a positive influence on the food processing sector. This calls for renewed private sector participation.

The reason why food processing sector's growth is important is easy to understand. There are several reasons to believe that food processing industry shows robust signs of taking a lead in solving household food insecurity in India. Food processing can create multiple layers of products catering to an exhaustive set of separate classes of population. It inherently employs the most efficient distribution channels, and since foods are processed, it takes much longer time for food to perish, hence avoiding the 'Great Indian Leakage.' Food processing also utilises economies of scale and it is entirely possible to produce processed foods under the affordability limit of most of the urban households. Food processing fulfils multiple goals. Apart from feeding millions with a variety of easy to use and affordable products, it boosts infrastructural growth of a country and provides huge employment. According to the Confederation of Indian Industry, the food-processing sector has the potential of attracting US\$ 33 billion of investment in 10 years and generating employment of 9 million person-days. (Ministry of Food Processing Industries)

With private players' participation, food processing can act as an important tool in fulfilling multiple roles in food security issues. Food processing chains develop a vertical integration of agri-food supply chains and create robust backward (from farmers) and forward (to markets) linkages. Major benefits are enumerated below:

- a. India has vast resources of raw materials which are typically suited for food processing. A large part of it gets either wasted or inaccessible due to low affordability of poor population. Food processing, employing economies of scale and strong linkages with farmers and markets can produce affordable products from such raw materials.
- b. A growing food processing sector fuels demand-driven growth for high value food production.¹⁹ High value food consumption has been rising and they promise higher return per unit of land and labour compared to food grains. (Joshi et al. 2004) This high-value produce also generates higher employment and incomes for smallholders, who own less than 2 hectares of land.²⁰ In this way, food processing sector puts pressure on smallholders to diversify. A derivative of this is relative reduction in production of food grains, which will impose lesser burden on storage houses of the FCI.
- c. Food processing creates firms with a vertical integration structure, thereby reducing transaction costs.²¹ This is a result of strong backward and forward linkages. Backward linkages with farmers are developed through

¹⁹ High value food mainly comprises of fruits, vegetables, milk, meat, egg and fish.

²⁰ These smallholders comprised around 58 percent of rural households in 2003. (Government of India 2006) So their well being is paramount for nations' welfare.

²¹ For detailed understanding of transaction costs, see Williamson (2002).

cooperatives, panchayats²² and other institutions. Processing centres have integrated cold chains for perishable products. By creating robust forward linkages to markets, avoidable intermediaries are bypassed. The retail food chains are directly contracted and transaction costs are reduced.

- d. The food processing industry attracts huge employment because of the diverse nature of its supply chain. It encourages skill development, training, entrepreneurship, investment, institutional development and providing a liberal policy environment.²³
- e. The food processing sector encourages contract farming. Contract farming is a valuable and practical system of in which both production and market risks are shared, especially for perishable goods. This sharing mitigates risks through support services. This also reduces transaction costs to a large extent. The buyer/firm gets assurance of supply and greater integration of another leg of production, the farmer/grower gets reliability of outlet, capital and protection against risks. (Birthal et al. 2008)

Policy recommendations

It is important that we pay due attention to two vital facts that surfaced in this discussion. *Firstly*, FCI's inefficient system should be supplemented by private players, and this should be an important determinant of any new policy. *Secondly*, due to emerging demand-driven food business and inherent benefits of private sector participation, private players should be given incentives so as to attract them to this sector. Since food processing essentially falls in the domain of private players' activity, this article argues in favour of carving out policies to support private entry in Indian food markets. In pursuance of achieving these objectives, following policy recommendations are given:

- a. Private sector purchasing should be encouraged. Such a move will lift up market prices and in turn reduce the requirement of price support. Consequently government costs would fall. (Jha and Srinivasan 2004)
- b. The costs of operation of the FCI can be reduced by decentralising procurement and storage and avoiding cross hauling of grain that takes place in the current centralised system.
- c. In the current system, there is a lot of conflict between the state and central government. State governments come up with complains of inadequate food allotments from the Centre. The Centre on the other hand blames State governments for not being able to fully utilize their existing allotments.

²² Local self governing bodies.

²³ These benefits are based on author's visits to Mega Food Parks and farmers interviews.

(Drèze 2001) Decentralisation with respect to such allotments would put an end to this unnecessary blame-game, while increasing efficiency.

- d. One good way to promote privatisation while still keeping substantial control is to let the FCI maintain a minimum level of buffer stock and then undertake open market operations in a dynamically established price band. (Jha and Srinivasan 2004) In fact, support price need not be determined by FCI at all, since its hoarding will anyways result in high inflation.
- e. FCI urgently needs to adopt the principle of “early-in and early-out” for consistent stock disposal and introduce modern and computerised system of inventory control and disposal. This means, instead of hoarding old stock, the FCI should release the older stock before releasing new grains.
- f. Internal audit division should focus its priorities in budgetary control, external trade and open market operations.
- g. A radical idea would be to give away long hoarded grains to marginalised sections of society for free (in food-for-work or anti-poverty programs). This is because when food stock is excess, there is no opportunity cost of releasing this stock.
- h. The FCI needs to be leaner than it actually is, in terms of over staffing. It is saddled with several layers of hierarchical organisational problems, and it needs to declare redundancies and cease to act as financial burden on state exchequer. In essence, the bureaucratic organisation has been over-staffed and inefficient. There is a growing need of more computerised, mechanised and e-commerce driven organisation.
- i. The high costs of maintaining public stocks can be reduced through encouraging private storage, which plays a complementary role to public storage. (Jha and Srinivasan 2004)
- j. Transportation of grains by the public sector basically follows the principal of transfer from surplus to deficit states. However, it has been shown that it is possible for a deficit state to import grains from a neighbouring deficit state, which in turn could import from another deficit or a surplus state or even from abroad depending on arbitrage benefits. (Jha and Srinivasan 2004) This is possible only through a more flexible environment for domestic trade, where markets are expected to reveal all information needed by private players who have to select the least cost options of trade.
- k. In terms of altering food habits and changing food processing sector in India, food processing sector needs to be institutionalised in mainstream economic policies. It has been done to a large extent through Mega Food Park schemes

of the Ministry of Food Processing Industries, under the advice of the Reserve Bank of India. However, a lot needs to be done to bridge the gap between rules/guidelines and implementation, along with creating more policies that are ingrained within the larger rubric of governance. This will help sustain and institutionalise the process of carrying the concept of food parks forward.

1. Incentives need to be provided not for investments in food parks and food processing industry. The incentives can either be in form of grants/aids or discounts to attract private players or in the form of assurances with regard to the laws and policies, say, simplifying the procedures required to buy or sell raw materials.

In essence, to build a resilient food industry, it is important that both public and private interventions develop synergy amongst them. This is possible by allowing and incentivising private initiatives in the sector.

Conclusion

The paper has tried to explore the policies in India, and critically examined two issues, (a) the role of parastatal agencies and their inefficient system of managing food resources, and (b) modern food supply chains, affected dramatically by changing lifestyles of urban India. Both issues, however different they may seem, hold onto a single common thread – need for private initiatives. Historically government intervention has called upon de-regulation of food supply in the country. Now, with increasing effects of globalisation and urbanisation, the modern food market has created a need for attracting further private players. Put together, both issues are interwoven deeply by way of their aims and needs. Both aim at improving food security, and both need private players. And hence, both couple with each other in suggesting important policy changes, affecting more than a billion of mankind's elements.

We can look at it in the following manner. India suffers from food insecurity. This means access/availability of food is less than the requirement. However, at the same time, India is a net agricultural trade exporter. In other words, the amount of food produced is more than the food required. But even then, the amount of food available is much inferior to food required. And so, the difference between food produced and food available amounts to food shortage. This food shortage is absorbed in the poor distribution and inefficient channels of FCI. Furthermore, it is contended that policies today need to take into account the rapidly changing urban food consumption scenario. This is important because once this is recognised, policies need to be aptly designed and re-designed to suit the needs and demands of the industry. This industry acts as a valuable fill-in component in the gap of food produced and food available, owing to its efficient retail and distribution chains, long perish-period, extended catering to varied class of population and affordable range (due to economies of scale). Therefore, to synchronise policy steps towards achieving food security in India, the principle should be (a) to improve state of

parastatal agencies and (b) to take due cognisance and implement favourable policies in transforming modern food retail chains. Apart from recognising the potential of food processing, policy steps need to ensure greater impetus on changing the structure and functional methodology of the FCI. The strongest way to observe both is to increase private participation in food policy sector.

References

- Acharya, S.S. 2004. *Agricultural marketing in India*, Part of Millennium study of Indian farmers, Report #17. New Delhi: Government of India, Academic Foundation.
- Banerji, Abhijit, and J.V. Meenakshi. 2004. Buyer collusion and efficiency of government intervention in wheat markets in northern India: An asymmetrical structural auction analysis. *American Journal of Agricultural Economics* 86(1): 236–253.
- British Broadcasting Corporation (BBC). 2009. Mixed Messages in Hunger Report. *BBC*, October 16.
- Birthal, Pratap S., Awadhesh K. Jha, Marites M. Tiongco and Clare Narrod. 2008. Improving Farm to Market Linkages through Contract Farming. IFPRI Discussion Paper 00814. New Delhi: International Food Policy Research Institute.
- Central Intelligence Agency. 2010. *The World Fact Book*.
- Chakravarty, Sujoy and Sejal A. Dand. 2005. Food Insecurity in India: Causes and Dimensions. IIMA Working Papers 2005-04-01, Indian Institute of Management, Ahmedabad, Research and Publication Department.
- Chand, Ramesh. 2003. Domestic reforms for trade liberalisation: Analysis and approaches. Paper presented at the Workshop on Analysis of Trade Liberalisation for Poverty Alleviation, April 21–25, in Colombo, Sri Lanka.
- Chauhan, U.K.S. 2008. Bridging the missing linkages. Presentation at the FAO/AFMA/FCI Regional Workshop on Integrated Supply Chain Management, March 31–April 4, in New Delhi, India.
- Drèze, Jean. 1990. Famine prevention in India. In *The Political Economy of Hunger, Volume 2*, eds. J. Drèze and A. Sen, 13–122. Oxford: Clarendon Press.
- _____. 2001. Starving the poor. *The Hindu*, February 26–27.
- Drèze, Jean, and Amartya Sen. 1993. *Hunger and Public Action*. Delhi: Oxford University Press.
- Dutta, Bhaskar and Bharat Ramaswami. 2001. Targeting and efficiency in the public distribution system: Case of Andhra Pradesh and Maharashtra. *Economic and Political Weekly*, May 5: 1524–1532.
- Fafchamps, Marcel, Ruth Vargas-Hill, and Bart Minten. 2008. Quality control in non-staple food markets: Evidence from India. *Agricultural Economics* 38(3): 251–266.
- Government of India. 2001. *Census of India, Registrar General Economic Survey, 2001, Ministry of Finance*.
- _____. 2006. *Livestock ownership across operational land holding classes in India, 2002–03*. New Delhi: National Sample Survey Organisation, Ministry of Statistics and Programme Implementation.

- Gulati, Ashok, Satu Kähkönen and Pradeep K. Sharma. 2000. The Food Corporation of India: Successes and failures in Indian food grain marketing. In *Institutions, Incentives and Economic Reform in India*, eds. Satu Kähkönen and Anthony Lanyi, 299-365. New Delhi: Sage Publications India Pvt. Ltd.
- Gulati, Ashok, Nicholas Minot, Chris Delgado, and Saswati Bora. 2007. Growth in high-value agriculture in Asia and the emergence of vertical links with farmers. In *Global Supply Chains, Standards and the Poor*, ed. J. Swinnen, 91-108. Wallingford, UK: CABI Publishing.
- Indiastat. www.indiastat.com
- Jha, Shikha, and P.V. Srinivasan. 2001. Taking the PDS to the poor: Directions for further reform. *Economic and Political Weekly*, September 29: 3779-3786.
- _____. 2004. Achieving Food Security in Cost Effective Way: Implications of Domestic Deregulation and Reform under Liberalized Trade. IFPRI MTID Discussion Paper No. 67. New Delhi: International Food Policy Research Institute.
- Joshi, P.K., Ashok Gulati, Pratap S. BIRTHAL, and Laxmi Tewari. 2004. Agricultural diversification in South Asia: Patterns, determinants and policy implications. *Economic and Political Weekly*, June 12: 2457-2467.
- Joseph, M., M. Soundararaja, M. Gupta, and S. Sahu. 2008. Impact of organized retail on the unorganized sector. ICRIER Working Paper 222. New Delhi: Indian Council for Research on International Economic Relations.
- Mattoo, Aaditya, Deepak Mishra, and Ashish Narain. 2007. *From competition at home to competing abroad*. Washington, DC: World Bank.
- Ministry of Food Processing Industries.
http://mofpi.nic.in/content_printpage.aspx?categoryid=142
- Minten, Bart, Thomas Reardon and Anneleen Vandeplas. 2009. Linking Urban Consumers and Rural Farmers in India: A Comparison of Traditional and Modern Food Supply Chains. IFPRI Discussion Paper 00883. New Delhi: International Food Policy Research Institute.
- Parikh, Kirit, A. Ganesh-Kumar and Gangadhar Darbha. 2003. Growth and welfare consequences of rise in MSP. *Economic and Political Weekly*, March 1: 891-895.
- Patnaik, Utsa. 2003. Food Stocks and Hunger: Causes of Agrarian Distress. *Social Scientist* 32 (7-8).
- _____. 2004. The Republic of Hunger. Public Lecture on the occasion of 50th Birthday of Safdar Hashmi, organised by SAHMAT (Safdar Hashmi Memorial Trust), April 10, 2004, in New Delhi, India.
- Pingali, Prabhu 2007. Westernisation of Asian diets and the transformation of food systems: Implications for research and policy. *Food Policy* 32(3): 281-298.
- Rao, V.M. 2001. The making of agricultural price policy: A review of CACP reports. *Journal of Indian School of Political Economy* 13(1), Jan-Mar: 1-28.
- Rashid, Shahidur, Ashok Gulati, and Ralph Cummings. 2008. *From parastatals to private trade: Lessons from Asian Agriculture*. Baltimore: John Hopkins University Press.
- Saxena, N.C. 2009. Call to Action: Hunger, Under-nutrition and Food Security in India. Centre for Legislative Research and Advocacy, Policy Brief Series No. 7.