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**Political Economy of Agrarian Crisis
and Slow Industrialization in India**

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Political Economy of Agrarian Crisis and Slow Industrialization in India

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ABSTRACT

This paper uses the structuralist framework of agriculture-industry synergy in an economy to discuss the performance of the agricultural and industrial sectors in India. The industry – agriculture relationship is argued to be integral to economic development as the agriculture sector supplies raw materials, surplus labour to the industrial sector and acts as a source of demand for industrial goods. However, in India this relationship has been complex. This paper looks at the supply side constraints in the agricultural sector and the demand side constraints in the industrial sector to assess the poor development and growth in the two sectors. It concludes that India has not followed the structuralist pattern of sectoral development and poor agricultural growth has not been conducive for demand led industrialization, adversely affecting factor markets for both labour and land.

Key words: *India, Industry-agriculture linkages, liberalisation, demand constraints, growth*

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INTRODUCTION

In recent years, India has drawn attention of global investors, policy makers and media for a maintained stunning economic growth rate of 7 – 9 percent until recently¹, while the United States and the European Union are experiencing low growth especially in the context of the current financial crisis. With a population of 1.18 billion (GOI 2006), it is expected that this high growth rate will make India a major player in the global economy. The prolonged recession and uncertainty in developed economies has made a section of global investors think about India as their potential investment destination. The global policy makers are also watching India's experience with interest.

However, a closer look at the Indian economy will reveal that growth is sector specific in favour of the service sector and is not inclusive (D'Costa 2011). Growth in the industry and the agriculture sector that employ the majority of the work force in the country has been less than impressive (Rao 2009). High GDP growth and slow growth in agriculture has skewed sectoral GDP against agriculture. In theory, the declining share of agriculture to overall growth is inherent to the process; however, this needs to be accompanied by a decline in workforce dependent on agriculture. The growth in India has not created enough opportunity for people working in the rural sector to move out of agriculture (Reddy and Mishra 2009). This is because the Indian organized sector experienced very slow growth in employment (even less than 1 percent) owing to which the Indian experience has been one of jobless growth'. This structural unevenness of growth, coupled with disproportionate policy and economic interventions in the past decades have led to the emergence of an

¹ "IMF lowers India's growth forecast to 6.1 percent for 2012" "Indian economy to grow 6.9 percent in 2012–13: World Bank" Though in 2011-12 India's growth rate declined to 6.5 percent (<http://ibnlive.in.com/news/indias-gdp-growth-slumps-to-65-pc-in-201112/263198-7.html>). It declined further to 5.4 percent during April to September 2012-13 and the government on lowered the growth projection for the current financial year to 5.7-5.9 per cent from 7.6 per cent estimated earlier (<http://timesofindia.indiatimes.com/business/india-business/Govt-lowers-growth-projection-for-current-fiscal-to-5-7-in-2012-13/articleshow/17648415.cms>)

inter-sectoral disequilibrium marked by slow industrialization and agrarian crisis (see Ramakumar 2010).

The relationship between the agricultural and industrial sectors is crucial in terms of its linkages (see Henley 2012 for Sub-Saharan Africa). However, uneven patterns of growth in the two sectors, historically and in the post reform periods has had socio-economic and political implications that have translated into poor growth and crisis (K.N. Raj in Kannan 2012). In this paper, using the framework of agriculture-industry relationship we discuss the problems in the agriculture sector, deteriorating linkages between the two sectors, challenges and constraints and the implications it has on growth. In particular, we will discuss the issue of structural challenges in the agriculture sector and its implications on industrial growth. We will also discuss the challenges of land availability for agriculture and industrialization, transfer of labour and the problem of rising food prices.

The paper is divided into four sections. The first section is a theoretical framework of the agriculture industry relationship in development of an economy. Here we discuss the 'industrializer' and 'agrarianist' views that focus on the different sectoral priorities in the process of development. The second section deals with the supply side constraints in agriculture because of structural challenges that exist in the sector. The problem of neo-liberal policies namely withdrawal of food, fertilizer and credit subsidy and in consequence rising cost of production, poor access to credit and technology along with decline in selling price of agricultural commodities made production condition in Indian agriculture non-viable (Narayanamoorthy 2007). The demand side constraints and the challenges of industrialisation in India are discussed in the fourth section. Here we argue the demand constrained nature of industrialisation in India and its implications in development. Poor development in the agrarian sector has acted as brakes to industrialisation. The last section deals with the present challenges to the agricultural sector and the constraints

faced by the industrial sector. In this section, we specifically discuss the issue of rising food prices and the availability of land for agriculture and industrialization.

THE INDUSTRY-AGRICULTURE LINKAGE

Agriculture contributes to the growth of industries particularly through food for the population, labour for the expanding industries, raw materials for certain industries, wage goods for workforce and savings to finance industrial investments. While the rural population is the consumer of goods produced by the industrial sector, it also depends on the industrial sector for inputs like chemicals and fertilizers and machinery.

In the development discourse there has been some debate about the nature and sectoral focus of the developmental process. Some 'industrialisers' think that development can only be achieved through industrialization, while 'agrarianists' propose that agriculture is the key to development. In the 1950's and the decade that followed, the dominant discourse on the role of agriculture were dominated by industrialisers like Prebisch (1950), Lewis (1954), Hirschman (1958) Fei and Ranis (1964) among others who saw agriculture as the only source of productivity that could be used to drive industrialisation and modernisation through the transfer of savings². According to Timmer (2002), this view was not seen as an urban bias, rather as an important aspect of development as it was believed that any attempt to help agriculture would only slow the economic growth process.

Arthur Lewis (1954) opined that the agricultural sector plays an important role as a supplier of surplus to the industry. This view saw the 'traditional' agricultural sector providing support for modernization of industry in two ways. First, the 'supply' of agricultural surpluses over time acts as a driving force to the industrial growth and second, the unlimited supply of labour at a constant real wage, which is higher than that of the real wage in agriculture. For Lewis the agriculture-industry analysis and consequent question of industrialization appears as a supply side problem alone where demand for industrial goods was

²Agriculture savings is acquired from taxation of exports, low agricultural prices, high prices on manufactured goods and overhauling the exchange rate (Timmer 2002).

not discussed. Lewis can be described as an industrializer that prescribed that industrialization is not at all possible without extraction of surplus from agriculture. (Ghatak and Ingersent 1984)

Kaldor (1967), Mellor (1976), Adelman (1984) among others made particular emphasis on demand side problem of industrialization. They emphasized that 'growth of the agricultural surplus is an essential condition to increase purchasing power necessary for sustaining industrial expansion'. Kaldor pointed out that while agricultural surplus is determined endogenously within the system, industrial expansion depends largely on 'outside stimuli' provided by the demand from agricultural sector. He says that for the sake of sustained industrialization the terms of trade between the two sectors should be in favour of agriculture, as it would benefit the industrial sector through increased purchasing power. Adelman (1984) emphasised the importance of the increase in agricultural productivity through technological innovations in agriculture would create a surplus that would keep food prices stable while increasing the demand for industrial goods in his 'Agriculture Demand Led Industrialisation' strategy.

Both industrializer and agrarianists portray industry and agriculture (synonymous to urban and rural) as separate but homogenous and undifferentiated entities. Lipton (1977) states that 'The most important class conflict in the poor countries of the world today is not between labour and capital ... It is between the rural classes and the urban classes'. In the Indian context the persistence of 'rural bias' (Byres 1979), 'landlord bias' (Kay 2006), or class domination through control over resources made agriculture, industry and the rural and urban sectors internally differentiated among economic groups. Despite terms of trade being in favour of agriculture in India for decades after independence, neither the industry nor rural poor benefit from it. The rural rich reaped the benefits of favourable terms of trade in agriculture and discriminated against the rural resource poor by blocking of land reform, resisting the implementation of minimum wage, social security legislation etc.

Mitra (1977) in Indian context states that the landlord class through its political influence maintained the inter-sectoral terms of trade in its favour. It also held back industrial expansion through a squeeze on profit. Patnaik (1987) showed that the landlords in rural sector appropriated gains from favourable terms of trade and the practice of trying 'to maintain their profit by reducing the share of wages in the net value added in agriculture'. This according to him this was detrimental in failing to raise demand for industrial goods.

NEO-LIBERAL REFORM, 'WITHERED AWAY OF STATE' AND SQUEEZED AGRICULTURE IN HANDS OF COERCIVE MARKET

Agricultural development in India prior to liberalization in 1991 can be categorized into three phases. The first stage being the reform and consolidation stage of the 1950's and 1960's followed by the green revolution stage of the 1970's and further belated green revolution in eastern states along with anti-poverty policy during 1980's. The political economy that succeeded colonial rule in India had the primary task of redistributing resources through a politically guided process of development. During this stage policies like the abolition of intermediaries, reduction of land revenue and expansion of irrigation facilities were initiated to deal with the institutional problems that were hindering growth and development in this sector (Kalecki 1972). However, concrete redistributive measures through land reform for agricultural development did not take place as ruling classes formed alliances with 'dominant propriety classes' consisting of industrial capitalists, the erstwhile *zamindars* and *jotedars* and rich farmers. These groups benefited from the halted and poorly motivated land reform initiative and also agricultural support and subsidies, the incentives of the green revolution (Bardhan 1984, Bhaduri 1984).

The green revolution in India marked a change in the attitude of the state towards agriculture. Hitherto the state had no concrete agrarian policy and its main role was to enable production growth and redistribution (Kohli 1987). However, agriculture policy failure, diminishing popularity of the Congress party and food shortage and dependence on foreign aid led to the adoption of the

'new approach' in agricultural development in the 1970's (ibid). The new approach changed agriculture in India into a cash based individual enterprise that required high investment, modern inputs and wage labour (Suri 2006). Despite making the country self-sufficient in food grains, the outreach of the program was limited to crops like rice, wheat and maize in regions that had access to irrigation. The remaining 60 percent of agricultural land growing other crops did not benefit. The outcome of this new policy were increased inter-regional inequalities, inter-personal inequality, intercrop imbalances, fluctuating outputs and environmental degradation due to poor land and crop management (Prasad et al 2007). The interregional inequality, however, reduced to a limited extent as some parts of the country particularly the eastern states like West Bengal, Bihar and Orissa experienced belated green revolution (Rao 1992). At the same time, the interpersonal inequality also declined to a limited extent with the implementation of the anti-poverty policies like Intensive Rural Development Programme (IRDP) and National Rural Employment Programme (NREP). As a result of the latter rural poverty declined substantially during 1980s. (Byres 1997). Liberalization of the Indian economy initiated in 1991 began in the industrial and service sectors and was driven by macroeconomic instability. It was theoretically assumed that the liberalization of industrial imports would restore terms of trade and the exchange rate would be rectified once the protection of industries is removed and therefore 'advancing the cause' of agriculture (Balakrishnan et al. 2008). However, after 20 years of neo-liberal reform the problems of sustainability, poor growth and development in agrarian sector persists. At the same time, people directly or indirectly depending on agriculture are faced with immiserization following high cost of production and low selling price.

Growth in the agricultural sector in terms of both gross product and output has decelerated in the period after 1991. From 3.08 percent during 1980-1990 the growth rate in agriculture has come down to 2.57 during 1992 to 2006 (Reddy and Mishra 2009). In terms of production, in the post reform period (1993-2006) saw a decline in the growth rate of food grains to 1.16 from 2.85

during the 1980's. The growth of all crops was again dropped to 1.09 from 2.56 in the previous period (Bhalla 2007). What is alarming is that this growth is below the rate of population growth in the country. The reason for this poor rate of growth has been attributed to neo-liberal policy interventions discussed earlier.

According to the Situation Assessment Survey of farmers conducted by the National Sample Survey Organisation (NSSO) in 2003 about 27 percent of farmers did not like their ancestral profession as it had become unprofitable. About 40 percent of farmers were willing to quit this profession due to non-viability of agriculture. The current situation prevailing in the agriculture sector has been termed as a crisis due to reasons of increased costs of production, poor selling price, decline in investments and capital formations in rural areas, poor access to credit, poor innovation and technological development and information asymmetry.

Increased Cost of Production following Withdrawal of Subsidy and Imbalance in Input Combination

The post liberalisation regime began the gradual withdraw subsidies on fertilizer and to relied on the market to determine its price³. This resulted in the steep increase in fertilizer prices, driving up the cost of production in agriculture. During 1991-92 to 2008-09 the price of Diammonium Phosphate (DAP) increased about 92.4 percent, the prices of Potash increased by 162.1 percent and the prices of urea increased by 67 percent⁴. The worst impact of this decontrol of fertilizers was the sharp increase in imbalance in the consumption of nitrogen-phosphate-potash ratio causing severe loss of soil fertility (Rao 2005b: 62-3). Table 1 shows the change in the cost of production of ten major crops between 1990-91 to 2005-06. Cotton showed the highest increase of 225 percent followed by bajra (194 percent) and Maize (176 percent). It should be noted that the latter two crops are predominantly produced and consumed by

³ Withdrawal of input subsidies was a major point in the Agreement of Agriculture negotiations of the WTO. It also became a major point of conflict due to the OECD countries reluctance to reduce them in their countries.

⁴ Fertilizer Statistics in India, Various Issues.

the poor. The two major green revolution crops in India, wheat and paddy saw an increase in cost of production by 165 percent and 169 percent respectively.

Table 1: Selected Crop-wise Cost of Production in India (1990-1991 to 1997-1998 and 2005-2006)

Crops/States	(Average cost Rs, Per Quintal)								
	1990-91	1991-92	1992-93	1994-95	1995-96	1996-97	1997-98	2005-06	% increase
Paddy	213,12	252,67	270,25	344,14	340,62	375,19	410,58	574,71	169.66
Bajra	228,26	313,51	263,77	274,62	534,31	403,11	343,21	670,14	193.59
Maize	206,83	308,43	235,24	353,75	321,77	531,17	469,24	570,74	175.95
Wheat	205,83	232,00	261,39	323,93	345,67	389,39	418,02	547,00	165.75
Urad	600,89	926,04	642,49	993,81	1119,41	1190,01	1218,84	1647,80	174.23
Groundnut	701,26	759,00	834,04	1018,84	1051,66	1074,16	1158,83	1585,63	126.11
Rapeseed & Mustard	498,87	567,23	637,82	690,12	746,96	847,76	1234,03	1198,04	140.15
Cotton	701,27	803,62	756,55	1246,85	1505,27	1537,98	2198,67	2277,47	224.76
Sugarcane	22,81	21,71	27,40	36,90	42,89	39,57	47,58	-	108.59

Source : *Agricultural Research Data Book 2002, & Ministry of Agriculture*

Lowering of Selling Prices with the Collapse of PDS and Agricultural Marketing

Since 1991 the farmers in India have become exposed to the market determined value of output (selling prices) which were always hitherto at the lower level of government announced Minimum Support Price (MSP). According to Kannan (2012) real value of support price (deflated by respective commodity specific Wholesale Price Index) has actually declined though nominal value of support price may have increased. With the introduction of targeted PDS system which only BPL card holder can benefit) FCI requires far less grain than before and therefore restricted purchase of grains from farmers. The recent amendments of Agricultural Produce Marketing Committee (APMC) Act in fact dissolved the government Mandis, and pushing farmers towards corporate retail chain, which control villages supply chain with stringent terms and conditions (Mehta 2005). Narayanamoorthy (2007) estimates the ratio between values of

output to cost of cultivation at less than one in 2001-02 for Cotton, Paddy, Sugar Cane, and Groundnut.

Decline in Investment and Capital Formation in Agriculture

According to the Situation Assessment Survey in 2003 conducted by NSSO (Report No. 497) a record 96 percent of farmers are running into a deficit as their consumption exceeded their income (negative investment). The deficit increases when we factor in net investment in productive assets (Patnaik 2007). India as a whole registered a small positive surplus, but a large number of state exhibited deficits. Between 1991-92 (48th round) and 2002-03 (59th round), there is absolute decline in the numbers of bovines, by 8 million ovines by 4 million, and poultry by 11 million. About 90 percent of farmers owned lower livestock numbers in 2002-03 as compared with 1991-92. Despite the decline in average size of landholding during 1992 and 2002-03 the percentage of landless households increased from 21.9 percent to 32 percent. The inequality of land holding measured in terms of Gini Coefficient for operated land increased from 0.588 to 0.694 during the same period⁵.

Capital formation in agriculture is one of main factors in increasing production to meet the requirements of the increasing population and to reduce market and environment risk of producers. The Public Sector plays an important role in directing growth and pattern of agriculture investment. In 2006-07 the Gross Capital Formation (GCF) in agriculture by the public sector was only 26 percent of total GCF in agriculture and 8.2 percent of the total GCF of the country. The trends in public sector capital formations as a share of total GCF from 1989-90 to 2007-08 has shown a declining trend (Table 2). Although total share of GCF in the Indian economy has grown by CAGR of 15 percent, the share of GCF in agriculture to the total share has declined. Even within the agriculture sector, there is an increase in private sector share in capital formation compared to the public sector and this has been declining rapidly.

⁵ Calculation by authors from NSSO 48th and 59th round data.

Table 2: Gross Capital Formation in Agriculture and Allied Sector in India

Year	GCF in Agriculture & Allied Sector (at current price in crores)				Share of Agriculture & Allied Sector in Total GCF (%)		
	Public Sector	Private Sector	Total	% of Private to Public Sector GCFC	Public Sector	Private Sector	Total
1989-90	3354	5833	9187	63,49	7,2	8,8	8,2
1995-96	6762	14605	21367	68,35	7,4	5,9	6,3
2001-02	10353	51285	61638	83,20	6,6	13,5	11,5
2002-03	9563	52319	61882	84,55	6,4	11,5	10,2
2003-04	12218	49249	61467	80,12	7	9,1	8,6
2004-05	16182	62666	78848	79,48	6,7	8,1	7,8
2005-06	20739	76818	97557	78,74	7,1	8,2	7,9
2006-07	25606	78883	104489	75,49	7,1	7	7
2007-08	27379	101287	128666	78,72	6,2	7,4	7,1
CAGR (1989-08)	11,8	16,21	14,9	1,14	-0,78	-0,91	-0,76
CAGR (2000-08)	14,90	72,99	11,09	-0,79	-0,89	-8,23	-6,66

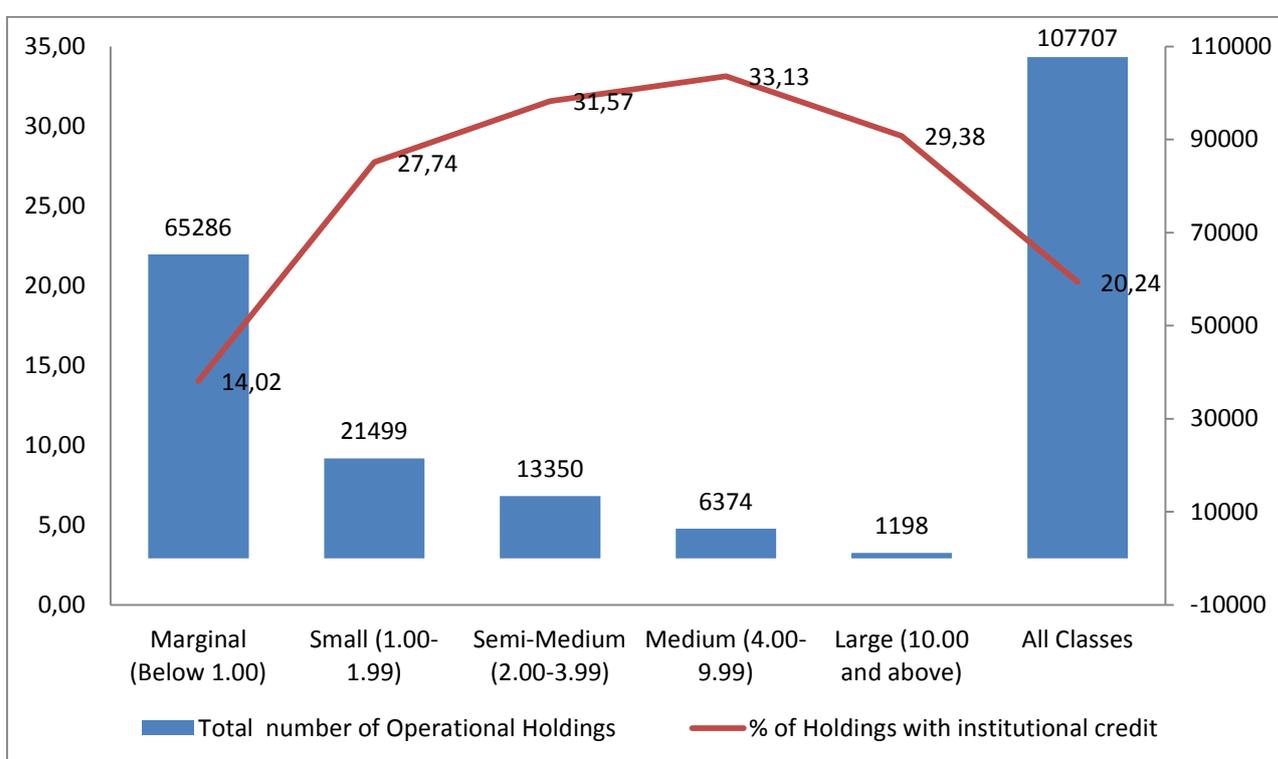
Source: Ministry of Agriculture, Government of India (2011)

Decline in Access to Credit

Trade liberalization and internal market liberalisation in the form of changes in subsidy regimes and institutional credit has brought about changes in the agricultural sector. In the absence of institutional support to enable adaption there have emerged some inconsistencies at the production level in the agricultural sector. Access to credit for cultivation is a major concern in India today. According to the 2001 census, only 20.24 percent of operational landholding has access to credit. The break-up further shows that the in the largest landholding segment which is the small and marginal landholdings only 14.04 percent have access while medium and large holdings have 33.13 percent and 29.38 percent respectively (figure2). This is because the medium and large farms have initial endowment of assets which they offer as collateral to access credit (Bhattacharyya 2005, GOI 2008: 14) The increase in costs of

cultivation (table 1) and the crunch for credit to buy inputs have led to the re-emergence of the hegemony of the money lender in rural India (Satyasai 2008). According to NSSO survey, moneylender's share in total credit increased from 10.7 percent in 1991 to 25.7 percent in 2003. The spate of farmer's suicides in different states in India in the last decade has also been associated with debt and increased risks in agriculture production (Shetty 2009, Suri 2006)

Figure 2: Size of Operational Landholdings and Percentage of Access to Institutional Credit (2001-02)



Source: Department of Agriculture and Cooperation, Agricultural Census Division

Arrested Technological Innovation and information dissemination systems

Technology is an important component in agriculture and development. Proponents of the technocratic approach argue that development in agriculture through increase in yields through innovation and technology helps create marketable surplus for development. The green revolution in India was the first

step taken towards the technocratic approach after almost two decades of trying the institutional approach.

The new industrial policy of 1986 and the seed policy of 1988 reclassified biotechnology firms as core industries and the liberalization drive allowed private players to enter seed production (Ramakumar 2010). Post 1991, a major changes in seed sector came about with the introduction of Intellectual Property Rights (IPR) as per the WTO agreement. However, these changes did not bring about changes in production patterns as expected. Bhalla and Singh (2009) notes that technology adoption in the 1980's brought about high growth rates in yield and crop diversification than in the post 1991 period. They point out that decline in public investment in irrigation and water management and research had adverse effects. In certain states, the adoption of crops like cotton did to an extent raise output and income levels, but at the same time, it also exposed them to agro-climatic risks and price fluctuation risks. Technological changes in seed and inputs increased the cost of production in agriculture, which made inputs more difficult to access for resource poor farmers. Technological change in the Indian agricultural sector is hindered by problems of access and poor dissemination. The state plays an important role in making available cheap and accessible technology. The general trend in real public expenditure on agricultural research and extension show that there has been a decline (Table 3). Private investment on agricultural research and extension cannot be a solution as it has been narrowly focussed on commercial crops suitable for irrigated region that may give profits and neglects the question of technology required for dry land agriculture (Kannan 2012).

Table 3: Growth in Real Public Expenditure on Agricultural Research and Extension (percent per annum)

Period	Growth rate in Public Expenditure in	
	Research and Education	Extension and training
1960s	6.5	10.7
1970s	9.5	-0.1
1980-1994	6.3	7.0
1990-2005	4.8	2.0

Source: Balakrishnan, Golait and Kumar (2008) in Ramakumar (2010)

Asymmetric information and information costs add to transaction cost and affects production decisions and the supply response. In order to reduce both controllable market risks and uncontrollable agro-climatic risks, effective information dissemination systems and streamlined and accessible marketing channels need to be in place. Transfer of technology is also another important dimension that needs to be address to rectify the supply problem. The public extension system is an important means of transfer of technology and effective information dissemination system. We have seen from Table 3 growth rate of public expenditure on extension and training declined from 7 percent during 1980-94 to 2 percent during 1990-2005. The Working Group on Agricultural Extension for the Eleventh Plan pointed out the due to the shortage of public expenditure, public extension system in most states in India collapsed (Kannan2012). Rao (2005b) and Vyas (2008) also indicated failure of public extension system as one of the prime causes of bad performance of agriculture since early 1990s. In the absence of an effective public extension system, a coercive form of 'input dealer led extension system' fills the gap (Kannan 2012). With the production strain to meet the demands of rising population and the precarious environmental balance that presently exists, it is important for technology to step in, in a big way. Yields and land use intensities are below potential in India and institutional change and public investments are necessary requisites to address them.

DEMAND CONSTRAINTS, LIBERALIZATION AND INDUSTRIALIZATION

The problem of industrialization in India is primarily demand constraint from agriculture. Agriculture provides home market for industrial goods and in India where almost 56 percent of population engaged in agriculture (exceptionally high figure, compared to 4 -6 percent in developed economies). This huge stock of low productive, and therefore, low income population in agriculture can be seen as the latent source of Lewisian supply of labour force for industrialization.

According to many scholars (Nayyar (1978), Chakraborty (1974), Sengupta, Kannan and Ravendran 2008, Mazumdar 2009) agriculture acted as a brake against industrialization in India due to the inadequacy of wage good surpluses and investible resources. In addition, agricultural raw material was restricted and the demand for industrial goods dried up. The latter was due to the severe inequality in agriculture and a vast majority of rural poor not having the purchasing power to buy industrial goods. The terms of trade was in favour of agriculture for nearly three decades after independence, but the benefits of it had been appropriated only by the rural oligarchy (Mitra 1977). The rural poor not having adequate purchasing power to buy food grains led to the shrinking of industrial goods market in rural India⁶.

The enhanced purchasing power or excess demand for industrial goods cannot be generated from rural India unless interclass inequality can be curbed (Sengupta, Kannan and Raveendran 2008). Industry does not gain from expanding market in the agricultural sector; rather it is faced with enhanced cost of production due to food price inflation, increased price of raw material, and withdrawal of the fertilizer, food and credit subsidy during liberalization era. Under these circumstances, industry has no other alternatives but to divert its production for the requirements of middle class and urban consumers, which is relatively small and saturated.

⁶ That was the reason there was a pile up of foodgrain stock till early 2000s. The policy makers thought it as other way round, that is, low effective demand for food due to rise in income and excess supply of foodgrains (Rao 2005a, 2005b).

According to a number of scholars, curbing of the inequality is the key to resolve the agrarian as well industrial impasse (Bagchi 1970, Nayyar 1978, Sengupta et al 2008, Mazumdar 2009). With NSSO data, Nayyar showed that the size class wise expenditure pattern of industrial commodities is highly skewed. In other words, a large portion of demand for industrial production originated from a narrow segment of population. With such a 'narrow demand base' the market for industrial goods must be limited and temporary as the demand for luxury goods on the part of a small fraction of population is likely to reach saturation point. Bagchi (1970) blamed government for failing to exercise effective control over allocation of resources between essential and non-essential on the one hand and consumption and saving on the other. While the former reflected in excessive importance of luxury goods in industrial production, the latter made government a failure in mobilizing domestic resources.

The problem rather than coming to an end was in fact intensified since the early nineties with the beginning of economic reforms. In the sphere of industrialization all the old legacies of big public sector enterprises backed by the strong policy of import substitution was scrapped. India framed its policies in the direction of the Washington Consensus, like privatization of the public sector units, giving tax incentives and other benefits to the corporate sector and liberalizing exports and imports.

During the liberalization period Government of India's New Industrial Policy was designed to give huge subsidies and concessions to the corporate houses particularly to foreign investors rather than to create new purchasing power for the rural poor. Both India and China have had similar problems in rural sector development and have followed a similar industrialization focused development trajectories in their early stages of development. In India, protection of the industrial sector without commensurate protection of agriculture shifted the terms of trade against agriculture and dis-incentivized the

sector (Balakrishnan et al. 2008). This protection led to an overvalued exchange rate in an attempt to keep the deficit artificially low, resulting in stunting the intrinsically competitive agricultural sector (ibid). In China, the strategy was to promote 'urban industries with capital intensive technology' (Fan, Chan-Kang, and Mukherjee 2005) and in order to achieve this, it introduced the strict control of rural urban migration through the 'hukou' system⁷ and through an urban rationing system that maintained low prices and a low urban consumption of agricultural products (ibid).

When China initiated its economic reforms in 1978, it started with its agriculture sector unlike India, where reforms were driven by macroeconomic instability and reforms began in the manufacturing sector (Fan Shenggen and Gulati 2008). While the logic of the Indian reforms was that the liberalization of industrial imports would correct the 'bias' and restore the balance of trade (Balakrishnan et al. 2008), China approach was different. It first incentivized its agriculture markets and created institutions required for a market economy before gradually opening up their markets (Fan Shenggen and Gulati 2008). According to the 'Economic Outlook for 2007-08' of the Economic Advisory Council, Indian agriculture indicators India has a comparative advantage over China in terms of arable land (161 to 130 million hectares), irrigated land (55.8 to 54.5 million hectares) and average land holding (1.4 to 0.4 hectares)⁸. Despite this the average yield in China in most food crops is twice as much as in India and the agricultural sector has had a sustained growth between 4-5 percent for the past 15 years compared to India's 2-2.5 percent.

CHALLENGES OF THE AGRICULTURAL SECTOR AND CONSTRAINTS OF INDUSTRIALISATION

The debate of agricultural development and industrialization by the agrarianist and the industrializers bring out the issue that development of the agrarian sector and development of industry. The relative terms of trade (ToT)

⁷The Hukou system was a residency permit that was issued to every family that demarcated their right of residency and employment to a specified locality. This severely restricted the movement of people especially from rural to urban areas.

⁸<http://www.hindu.com/2007/09/03/stories/2007090355411000.htm>

between agriculture and industry plays an important role the respective sectors competitiveness. If ToT is favourable towards the agricultural sector, higher incomes in the sector will lead to an increased demand for industrial goods. However, the adverse effect of a favourable ToT is that a productive agricultural sector would have increased wages that will affect labour transfer and accumulation. In the case of India, as mentioned early the rural elites benefited from the favourable terms of trade. The challenges both sectors face are the rising prices of food and agricultural raw material, land availability for industrial and agricultural development and the poor migration flow from the rural to the urban areas following the pattern of jobless and service led growth of the economy.

Food inflation in India today is a big concern. In the past two years, food prices in India rose in line with the world food prices and when the prices began a downward trend at the global level, the Indian scenario saw a continued increase. Although drought and subsequent fall in production is blamed for this, such sustained upward trends in prices have not been witnessed in previous instance like 2002-03 drought induced supply shock where the food price increase was only 3-4 percent (Chand 2010, 10, Kumar, et al 2010). The present price shock in food has been a result of increasing demand for 'grain intensive animal production' in a situation, where, as discussed earlier, absolute number of cattle and poultry declined during 1991 to 2002-03 apart from indebtedness and asset loss during the same period. This is partly due to the increased price of feed following grain output stagnation. The effects of price rise on food have a detrimental effect on industrial wages. Table 3 gives the CPI numbers using 1982 and 2001 as the base years for industrial workers from 1990 to 2010. The CPI food index has increased by 62 percent since 1990 using 1982 as the base year and 28 percent from 2006-2010 using 2001 as the base year.

Table 4: Consumer Price Index Number for Industrial Workers (General and Food) in India (1990 to 2010)

Year	GeneralIndex	FoodIndex
I-Base 1982=100		
1990-91	193	199
1991-92	219	230
1992-93	240	254
1993-94	258	272
1994-95	284	304
1995-96	313	337
1996-97	342	369
1997-98	366	388
1998-99	414	445
1999-00	428	446
2000-01	444	453
2001-02	463	466
2002-03	482	477
2003-04	500	495
2004-05	520	506
2005-06*	540	526
II-Base 2001=100		
2006-07	125	126
2007-08	133	136
2008-09	145	153
2009-10	163	176

Source: Ministry of Labour, Government of India.

With the population increasing at 1.4 percent annually⁹, the need for rapid growth in food production is necessary. In the light of increased cost of production in agriculture, low transfer of technology and structural challenges the strain for agricultural land is also a major concern. The need for land for industrial development on one hand and the position of agricultural land on the other has led to the emergence of tension between sectors for land.

⁹ <http://data.worldbank.org/indicator/SP.POP.GROW>

The objective of Indian land reform were abolition of intermediaries (landlords), empowering the sharecroppers and acquisition and re-distribution of ceiling surplus land among landless or near landless. In essence, the logic of the initiation of land reforms in India was to empower the rural poor. This theoretically could create a robust market for industrial goods. However, the government failed to realize the demand constraint nature of slow industrialization. Particularly during the liberalization period, the government concentrated more on the supply side macroeconomic management, which was the core philosophy of the Washington Consensus.

The SEZ (Special Economic Zone) Act was finalised by the government of India in 2005. According to this Act these zones were to be 'carriers of economic prosperity' aiming to boost economic growth at a fast rate, assuming that affluence in the rural areas through infrastructural facilities and job provision in manufacturing and other services would go along with it. Following the passing of this Act, a number of Indian states cutting across political ideologies raced to set up SEZ in their respective state by giving enormous concessions and incentives to the investors. A few of which are

- each SEZ is considered as a foreign territory and duty free zone
- 100 percent exemption from income, sales or service tax for first five years, and 50 percent exemption for the next five years
- freedom from environment income assessment
- allowance to bypass state electricity regulatory commission and state taxes on raw material
- Assurance of all basic infrastructure on priority.

The SEZ act in essence aimed at providing land for industrial development and incentivizing it. This model of incentivization has been common in many emerging economies and the results have been a mixed bag. The SEZ in China aimed at earning foreign exchange and encouraging regional development. China did not encourage any national bourgeoisie to grow that

could potentially challenge the socialist system. Instead, these zones were meant to insulate the rest of the economy from the disruptive effects of capitalism (Gopalakrishnan 2007). Ge (1999) described Chinese SEZ as a 'window' thorough, which 'the rest of the domestic economy could be connected to the outside world, even without leaving the door wide open'. The productivity, growth rate and employment generations in Chinese SEZ were phenomenal (Ge 1999). However, China also faced peasant protest against land expropriation. (Walker 2006, Guo 2001). China has been able to control them, partly because land is the state property (Ge 1999). In spite of that China had many negative aspects of industrialization, like creation of speculative bubbles (Wong 1987), low compensation for evicted people (Cartier 2001), child labour (Weil 1996), high crime rates including sex trade in the industrial towns and SEZs (Goswami 2007).

In India, the industrial sector has been facing a shortage of land for development. As the SEZ initiative turns to agricultural land to meet its demand, it has stirred up much opposition and debate. However, the dynamics of agricultural land needs to be understood in order to address the issue of land for industries. The three main losses a small farmer has to be compensated for is his land, family security and the rights to commons (Sau 2007). In the post liberalisation period, land acquisition has become highly speculative. The emergence of an industrial project is expected to raise the price of land, therefore farmers often to hold out from selling their land (ibid). In many cases, land mafias buy land from the farmers for speculative purpose. Although this makes the state an important player in providing industry with land and in assuring proper rights and compensations are meted to farmers.

Transfer of labour from rural areas to urban areas as a part of the Lewisian model is an essential component for development. The two hypotheses by which this is said to function (as push and pull factors) is a population growth putting a strain on rural resources and pushing landless

labour into urban areas in search of work and b) as cities develop opportunities for employment draw surplus labour into the cities (Williamson 1988).

In a country like India, the appropriate economic policy is that promotes high employment content (Bhaduri 1996). Despite high growth rate in the economy, the level of employment in absolute term in organized manufacturing remained almost constant since the beginning of the liberalization period (Patnaik 2007). Although all the existing big manufacturing units expanded their production, their employment rates have witnessed a downward trend (Banerjee-Guha 2008) and the liberalization era can be described as one of jobless growth.

The inequality of the income distribution also largely increased during the liberalization period. The land and asset inequality particularly in rural areas increased (National Sample Survey Organization, different rounds). Therefore the basic features of the crisis as showed by Nayyar (1978) and Bagchi (1970) in fact deepened during the liberalization period (Patnaik 2005). The narrow demand base of the industry becomes narrower. A group of affluent middle class has come up who are socially confident, globally active, economically visible, technologically suave, and youthfully smart (D'Costa 2010).

This affluent small class though very small as a share of Indian population (may be 10-15 percent) but in absolute number its size (around 100 - 150 million) may be far greater than any European country. This is why during the liberalization period there was some expansion of automobiles, IT or software industry which are generally demanded by the rising middle classes. This is in spite of the fact that during the liberalization period the employment in manufacturing sector alone remained stagnant and the share of secondary sector in GDP in fact declined from 29 percent to 22 percent during nineties (Patnaik 2005). The problem remains as Nayyar (1978) pointed out that this market for Indian industry becomes limited and temporary. Apart from the fact that nothing like Lewisian transformation is possible because the surplus labour

from agriculture cannot find employment in manufacturing sector because of the latters' employment stagnation (Patnaik 2005).

CONCLUSION

India has not followed a set path of development as chalked out by the industrializers and the agrarianists. At various stages, the emphasis and the policy focus have shifted. What has been agreed upon is the importance of the interdependence and the linkages between the two sectors. Since the introduction of neo-liberal reform in 1991 there was decline in fertilizer, food and credit and there was a shift from food to commercial crop. However, the consequences have not all been good. Agriculture growth has fallen below the population growth rates, the cost of production in agriculture has risen while the selling price of grains have decline and there has been a virtual collapse in agricultural technological progress and information dissemination systems. This has been the true face of the agrarian crisis that has made this sector non-viable and investments decline. The rising food prices have had an upward influence on the industrial wages in India.

Industrial growth in India is demand constrained (Rao 2009: 1282). Poor growth in the agricultural sector has not been conducive to agriculture demand led industrialisation, as this has led to a low demand for industrial goods in the country. The major concentration of development has been in the luxury and semi luxury commodities led growth targeted at the growing middle class. The demand generated by the middle class is small in comparison to the total potential size of the market for industrial goods, and this demand is soon saturated. Production and consumption of the industrial goods for the middle class and by the middle class are not wage goods but luxury goods. The production and consumption structure of industrialization, therefore, has excluded a vast mass of rural and urban poor. The exclusion process is accentuated by the fact that the pattern of this industrialization is highly capital intensive and not labour intensive, requiring only a small section trained employees. Therefore, there is no mechanism through which rural and urban

poor can be absorbed by these industries. The exclusive pattern of industrialization has generated peasant movement against land acquisition. Land for industrial development is a big concern today. At the same time socio-political reactions towards acquiring agricultural land for industrial development has increasing led to conflict in many parts of India. In the process of development, these issues and challenges need to be addressed and reconciled in order for development and growth in the industrial and agricultural sectors.

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