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## **Manufacturing and Trade Liberalisation of India: Continuing the Debate**

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# Manufacturing and Trade Liberalisation of India: Continuing the Debate

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**Abstract:** The paper attempts to identify the reasons behind the differential performance of the registered and unregistered manufacturing sectors of India during the post-reform period. The motivation for this study comes from the econometric results of Ghosh Dastidar and Veeramani (2014) who find that trade liberalisation has positively affected the unregistered sector growth performance but not that of the registered segment. Besides discussing the probable reasons behind the absence of a trade-growth nexus in the case of the registered sector, the paper reviews the theoretical literature on the unregistered sector - trade liberalisation association with an aim to identify the channels through which trade liberalisation might have affected the performance of the unregistered segment. It seems that trade liberalisation benefitted the unregistered sector indirectly through the increase in sub-contracting activities from the registered sector. Absence of rigid labour regulations also helped the unregistered sector undergo restructuring during the post-reform period and achieve faster growth through elimination of inefficient firms, something which the registered segment failed to do.

**Keywords:** Registered Manufacturing, Unregistered Manufacturing, Trade Liberalisation, Growth, Employment, India

**JEL Classification:** F10, O14, O25, L60

## 1. Introduction

The Indian economy has experienced a period of rapid growth following the extensive trade reforms undertaken since the 1990s. Although the reforms were particularly targeted to the manufacturing sector, economic growth was predominantly led by the performance of the services sector and, overall, the manufacturing sector in India never really ‘took off’. As the Indian economy started to adopt a pro-business regime by moving away from a government-led growth model during the 1980s, the GDP composition started to shift towards services with a subsequent decline in the manufacturing share.

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**Table 1: Sectoral shares in GDP of India**

<b>Year</b>	<b>Agriculture, value added (% of GDP)</b>	<b>Manufacturing, value added (% of GDP)</b>	<b>Services, etc., value added (% of GDP)</b>
1980	35.4	16.2	40.3
1990	29.0	16.2	44.5
2000	23.1	15.4	50.8
2010	17.7	14.5	55.1

Source: World Development Indicators (2012)

We see a similar pattern if we look at the sectoral shares of India's trade (Tables 2 and 3). Share of services exports (in total exports) increased by about 20 percentage points between 1990 and 2010 whereas the manufacturing share has gradually declined over time. Even though manufacturing goods are the highest traded components in terms of share in total exports and showed some growth immediately after the 1991 liberalisation, this share then persistently fell. Similarly, the manufacturing sector has been exhibiting a declining trend in terms of its share in total imports during the post-reform period.

**Table 2: Sectoral shares in total exports**

<b>Year</b>	<b>Agriculture</b>	<b>Manufacturing</b>	<b>Services</b>
<b>1990</b>	0.04	0.70	0.26
<b>1995</b>	0.01	0.76	0.23
<b>2000</b>	0.01	0.67	0.32
<b>2005</b>	0.01	0.57	0.42
<b>2010</b>	0.02	0.52	0.46

Source: Author's own calculations based on data from World Development Indicators (2012)

**Table 3: Sectoral shares in total imports**

<b>Year</b>	<b>Agriculture</b>	<b>Manufacturing</b>	<b>Services</b>
<b>1990</b>	0.05	0.64	0.31
<b>1995</b>	0.05	0.62	0.33
<b>2000</b>	0.04	0.54	0.42
<b>2005</b>	0.02	0.60	0.38
<b>2010</b>	0.02	0.59	0.39

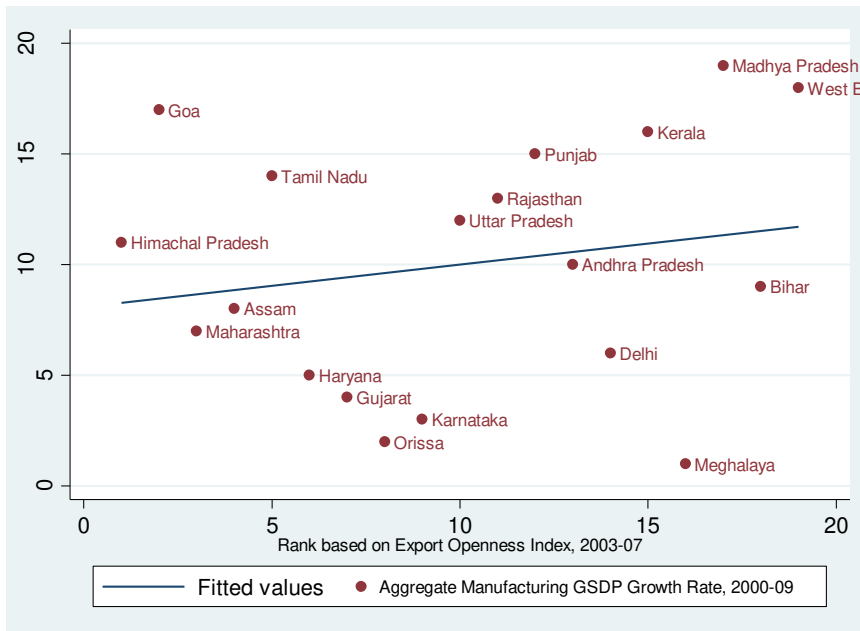
Source: Author's own calculations based on data from World Development Indicators (2012)

The above figures give the impression that the manufacturing sector failed to take advantage of the trade reforms undertaken since 1991. A similar sentiment echoes in many past studies. Gupta and Kumar (2010) discuss how the manufacturing sector failed to take advantage of the reforms undertaken during the 1980s and 1990s with the aim of boosting the sector's growth in India. Instead the services sector registered a remarkable growth by contributing about two-third of the GDP growth during the post-reform period. Using time-series analysis, Banga and Das (2010) show that growth of the Indian manufacturing sector is not an export-led growth. Kumari (2005) attempts to analyse the effects of economic liberalisation on the output growth of Indian manufacturing using Chenery's factor decomposition approach based on an input-output framework and concludes that domestic demand has been the major source of growth. Banga (2014) argues that opening up to international trade exposed the manufacturing sector to the risk of 'hollowing-out' as it faced competition in both domestic and external markets from other countries, particularly from China. After the trade reforms, imports have increased at a faster rate compared to exports as the domestic demand has been increasingly catered by cheaper manufactured products from abroad.

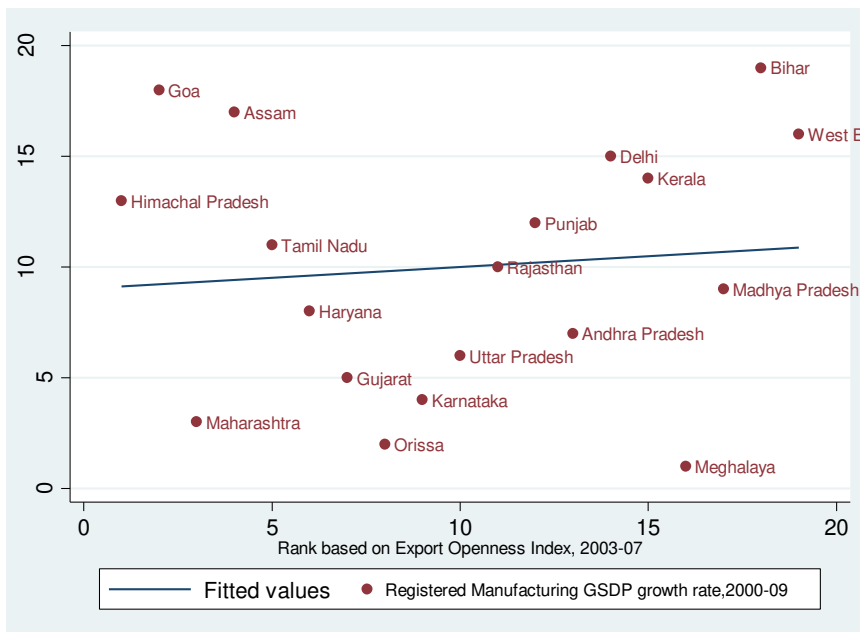
However, it is not the case that the Indian manufacturing sector has completely failed to take advantage of the trade reforms undertaken during the last two decades. One unique feature of India's manufacturing sector is the existence of a dualistic structure. All factories that employ more than ten workers with the aid of power and more than twenty workers without the aid of power are classified under registered (or, organised) manufacturing sector. All other manufacturing activities are classified under unregistered (or, unorganised) sector. The unregistered sector in India is large, accounting for 74.3% of total non-agricultural wage employment and 87.1% of total manufacturing employment in 2009 (ILO, 2012). Constructing a trade openness index for 19 Indian states, Ghosh Dastidar and Veeramani (2014) examine the relationship between trade liberalisation and the growth rates of both registered and unregistered manufacturing Gross State Domestic Product (GSDP). The panel data analysis conducted in the study indicates that there is a positive association between trade and manufacturing growth which is driven by the performance of the unregistered sector and that trade liberalisation has no effect on the registered sector. The study has constructed two trade openness indices: one based on trade volumes (known as the export openness index) and the other based on trade barriers (known as the tariff openness index). If we look at the following scatterplots (Figures 1, a-c), which examine the correlation between ranks of the states on the basis of openness indices constructed by that study and on the basis

of aggregate, registered and unregistered manufacturing GSDP average growth rates, it does seem that there exists some positive correlation between trade openness and manufacturing performance though the degree of correlation seems to differ significantly across the two manufacturing sub-sectors.

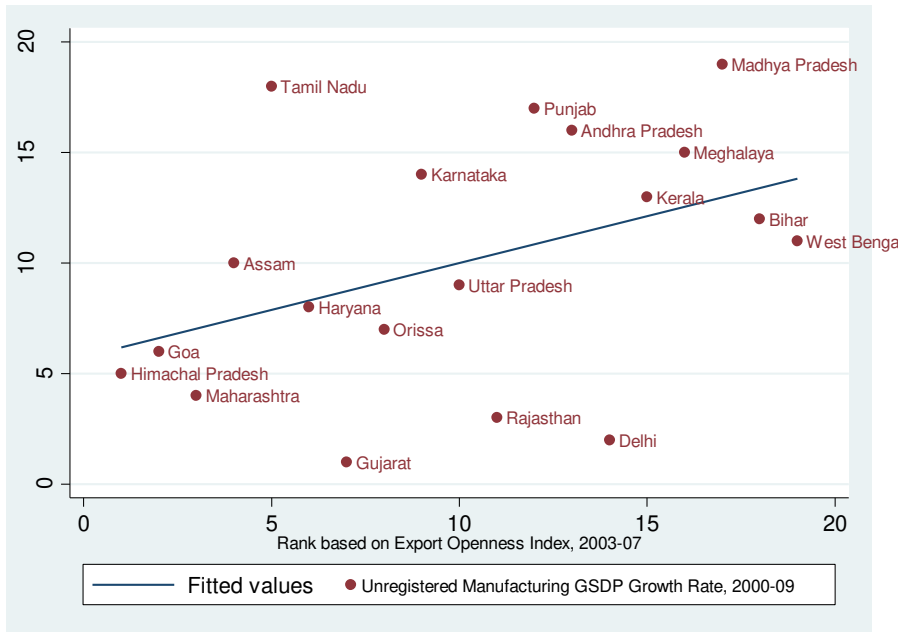
**Figure 1: Export Openness Index and Manufacturing Growth Scatterplot**



(a)



(b)

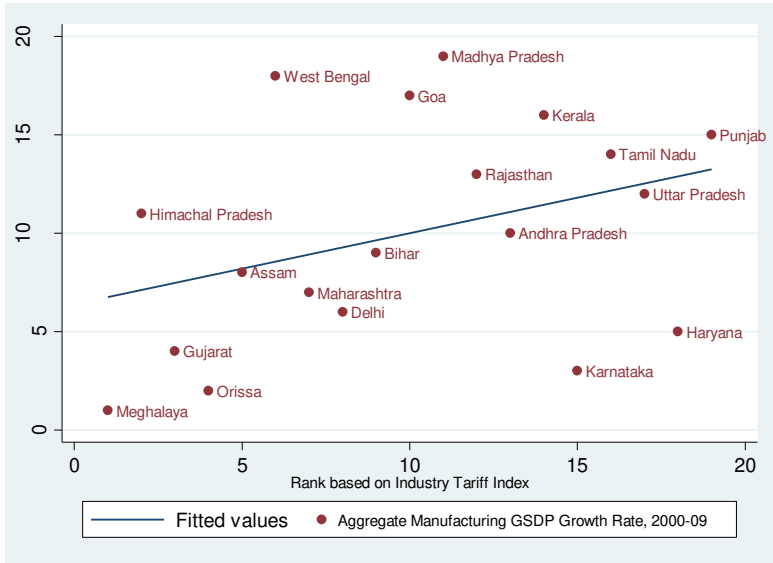


(c)

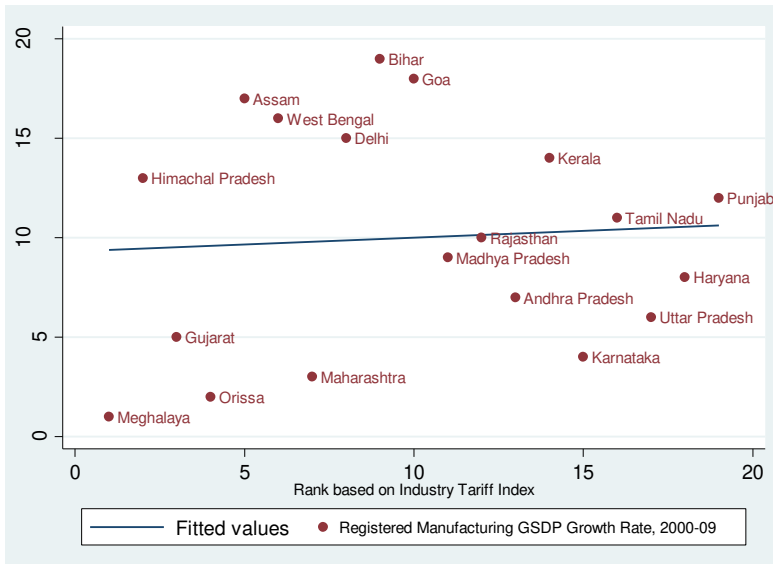
Source: Ghosh Dastidar and Veeramani (2014)

The unregistered manufacturing sector seems to have a strong association with trade openness (Figure 1c). The slope of the line of best fit is positive indicating that a higher level of trade openness is associated with higher growth rate in the unregistered sector. However, this positive relationship seems to be non-existent if we look at the registered sector (Figure 1b). The correlation between manufacturing growth and the industry tariff index is presented in the Figures 2(a-c). Overall, the picture obtained is very similar to that in the previous scatterplots. The unregistered sector exhibits a strong correlation with trade openness; whereas there seems to be no relationship between the registered sector and trade barriers. It again looks like that the positive relationship between aggregate manufacturing sector and trade openness is solely driven by the unregistered sector. As seen in the figures below, the slope of the line of best fit is positive since Ghosh Dastidar and Veeramani (2014) assigned the first rank (1<sup>st</sup>) to the least protected state and the last rank (19<sup>th</sup>) to the most protected one.

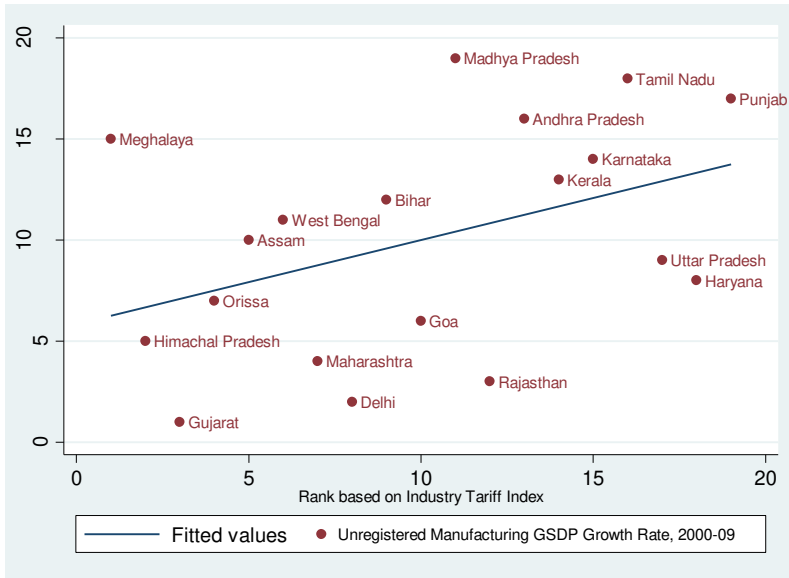
**Figure 2: Industry Tariff Index and Manufacturing Growth Scatterplot**



(a)



(b)



(c)

Source: Ghosh Dastidar and Veeramani (2014)

Given the above discussion, two questions arise:

- a) Why the registered sector has failed to take advantage of the trade reforms? and,
- b) How can the positive relationship between unregistered sector performance and trade liberalisation be explained?

The paper aims to answer these questions by adopting a qualitative approach. Ghosh Dastidar and Veeramani (2014) cited labour market rigidities as the main determinant of the nature of relationship between India's manufacturing sector and trade. An attempt has been made in this paper to develop the analysis of the 2014 study by exploring other probable reasons. In addition, the employment performance of Indian manufacturing is briefly explored in this paper with the aim of understanding the reasons behind the 'jobless' growth of Indian registered manufacturing sector. The remainder of the paper is structured as follows. Section 2 gives a brief overview of the growth and employment performance of the manufacturing sector. Sections 3 and 4 discuss how trade liberalisation might have affected the pattern of growth and employment generation in both the registered and unregistered sectors. Section 5 concludes.

## 2. Growth and Employment performance of the Manufacturing sector: An overview

Immediately after independence, Indian manufacturing grew at an impressive pace during the 1950s. Both the sub-sectors-registered and unregistered-grew at a faster rate than the overall



economy (Thomas, 2002). The growth slowed down in the 1960s and 1970s. Following the industrial reforms in the 1980s, the manufacturing sector revived and reached a growth rate of 7.3% from 5% in the 1970s. During the 1990s, the growth rate accelerated further in both the sub-sectors. However, it was followed by a slowing down in the 2000s.

**Table 4: Growth Rate (in %) of Indian Manufacturing Sector-1980s to 2000s (at constant 1993-94 prices).**

Time Period	Overall Manufacturing	Registered Manufacturing	Unregistered Manufacturing
1950s	6.4	7.8	5.1
1960s	4.2	4.9	3.4
1970s	5.0	5.0	5.0
1980s	7.3	8.0	6.2
1990s	9.3	10.2	7.5
2000-2007	7.9	8.6	5.5

Source: Thomas (2002) and RBI Database (various years)

Over the past three decades, the registered sector has been growing at a faster pace than the unregistered sector. Consequently, the contribution of unregistered manufacturing sector to real manufacturing GDP has been consistently declining over the years. For instance, in the earlier half of the eighties, this share was approximately 45% and it has fallen to about 33% in 2008-09 (Trivedi et al., 2011). However, the growth in the registered segment has been ‘jobless’ if we look at the employment statistics. The employment share of the registered sector in the total labour force has been steadily declining over time. In 1981, the registered sector employed 7.49% of the total labour force whereas in 2005 it employed only 5.56% (see Table 5 below). On the other hand, the unregistered sector accounted for around 94% of the total manufacturing employment in 2005. During the time period-1981 to 2005- the average annual growth rate in the employment of the registered sector was 0.60% whereas that in the unregistered sector was 1.95%.

**Table 5: Employment Performance of the Registered and Unregistered Sectors**

Time Period	Registered (in million)	Unregistered(in million)
1981	22.9	282.83
1991	26.73	342.41
2001	27.79	423.59
2005	26.46	449.67
<b>Average Annual Growth Rate(%)</b>	<b>0.60</b>	<b>1.95</b>

Source: Alessandrini (2009)

The question is whether this pattern of growth and employment generation is linked to India's trade liberalisation process.

### 3. Growth and Trade Liberalisation

I start by discussing the probable reasons behind the absence of a trade-growth association in the case of the registered sector. Then, the discussion moves on to explore the channels through which trade liberalisation might have affected the performance of the unregistered segment.

#### 3.1 Registered Sector and Trade Liberalisation

##### *Reforms of the 1980s: 'Internal Liberalisation'*

Rodrik and Subramanian (2004) attribute the growth in the registered manufacturing sector to the productivity surge owing to the pro-business policies undertaken by India during the 1980s. The study argues that the reforms undertaken since 1991 such as trade reforms were more 'pro-market' rather than 'pro-business'. The former primarily focuses on removing impediments to markets by removal of entry barriers. All the 'pro-business' reforms such as removal of price controls, access to foreign intermediate goods, gradual abolition of the 'license-raj'<sup>2</sup>, capacity expansion for incumbents and reduction in corporate taxes took place in the 1980s. In other words, the 'attitudinal' shift in the government's policy-making with regards to business and privatisation took place in the 1980s and that policy framework carried on into the 1990s with further liberalisation (also known as 'external liberalisation').<sup>3</sup> Rodrik and Subramanian (2004) even say that true liberalisation was, by and large, an anathema to registered business at that time. If we look at Table 4, we see that the growth rate of the registered sector increased significantly during the 1980s compared to what it was in the preceding two decades. Moreover, it should be noted that trade barriers remained high throughout the 1980s and started to decline significantly only after the 1990s. As seen in Table 6 below, the average effective rate of protection and the import coverage ratio were significantly higher during the 1980s as compared to the 1990s. The trade barriers declined marginally during the second half of the 1980s and then were significantly reduced once the

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<sup>2</sup> **License Raj:** After independence, India's industrial policy had been shaped by the 1951 Industries (Development and Regulation) Act which introduced an elaborate system of licenses and permits that regulated and restricted entry of new firms and expansion of existing ones (Aghion, et al., 2008).

<sup>3</sup> Hence, it is not surprising that most studies on Indian growth find a structural break in the growth rate of Indian GDP around 1980 (Wallack, 2003; Sinha and Tejani, 2004).

trade reforms were unleashed in the 1990s. So, it cannot be claimed that the increase in growth in registered manufacturing sector during the 1980s was because of increasing trade openness.

**Table 6: Trade Barriers in India, 1980-2000**

	<b>1980-85</b>	<b>1986-90</b>	<b>1991-95</b>	<b>1996-2000</b>
<b>Average effective rate of protection</b>	115.1	125.9	80.2	40.4
<b>Import coverage ratio</b>	97.6	91.6	38	24.8
<b>Import penetration rate</b>	10	11	12	16

Source: Das (2003)

Moreover, the effects of the reforms during the 1980s were more pronounced in the case of the registered manufacturing sector than unregistered businesses. The gap between the growth of the aggregate registered and unregistered sectors was 4.3% in the 1980s compared with 1.7% in the 1970s (Rodrik and Subramanian, 2004). Following the industrial deregulations in the 1980s, the registered sector benefitted most because it was now easier for the firms to expand existing businesses and, also, venture into new sectors and sub-sectors. Prior to the 1980s, one of the main reasons why many entrepreneurs chose to operate from outside the registered sector was to avoid the jurisdiction of the 1951 Industries Act and the associated red-tapism and bureaucracy of the ‘license-raj’. Since the 1980s, many firms from the unregistered sector (including people from self-employment) started to come into the registered sector. Thus, the high growth exhibited by the registered sector in the 1990s (10.6%, see Table 4) can be attributed to the internal liberalisation rather than external liberalisation measures such as trade reforms. The last argument finds further support when we discuss the ‘lag effects of trade reforms’ below.

### ***Labour market rigidities and industrial disputes***

There is a large literature which cites labour market rigidities and labour problems as one of the prime reasons behind the mediocre performance of Indian registered manufacturing. For instance, West Bengal, one of the worst performers in manufacturing among Indian states, had the highest number of man-days lost due to lockout and strikes among all the states. The number of man-days lost in West Bengal was about 69% of all man-days in India in 2005. On the other hand, all the better performing states experienced a substantial decline in the incidence of industrial disputes during the post reform period. In 2005, the combined man-days lost in Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Punjab and Haryana was only

7.75% of all man-days lost in India during that year (Sarker and Das, 2011). States with higher labour market rigidities are also less attractive for industrial investments (Panagariya, 2006). Mitra and Ural (2008) find that trade liberalisation benefits most the export-oriented industries located in states with flexible labour-market institutions and deregulation does not have a positive impact on industrial productivity in states with bad labour institutions.

Flexibility in factor markets is required to take advantage of trade liberalisation. This is because opening up to trade leads to restructuring across the economic sectors. As an economy opens up, sectors where the economy has a comparative advantage expand. Conversely, import-substituting sectors shrink because openness brings in foreign competition which compels the previously protected and inefficient firms to close down. Consequently, unemployment rises in the sectors which were previously import-substituting and workers start to move into the expanding sectors where there is comparative advantage. However, the registered sector in India cannot undergo this restructuring encouraged by comparative advantage due to rigid labour laws (particularly the Industrial Disputes Act) and so the impact of the trade reforms is probably not emerging. On the other hand, unregistered manufacturing units operate under a more liberal environment because they are not registered under the Act and hence were probably able to take advantage of trade liberalisation.

### ***Lag effects of Trade Reforms***

Hypothetically speaking, economic reforms are expected to improve the growth performance of the manufacturing sector because of static efficiency gains through reallocation of factors as well as dynamic efficiency gains through trade liberalisation. The puzzle of India's reforms is that a surge in productivity growth was observed following the 1980s reforms, but no such pattern or probably even an inverse pattern was observed after the 1990s reforms when the productivity growth decelerated from growth rates observed in the 1980s (Goldar and Kumari, 2003; Virmani and Hashim, 2011).

Some studies have put forward the 'J curve of liberalisation and productivity'<sup>4</sup> hypothesis and argued that the effects of the trade reforms of the 1990s may have started to be felt in Indian manufacturing with a time lag. While the 1980s reforms involved limited

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<sup>4</sup>**The J curve hypothesis of import liberalisation and productivity change:** In a heavily protected economy, a major import liberalisation will initially slow down productivity growth and result in its acceleration only after a lag (Virmani, 2005).

deregulations and partial liberalisation of a few aspects of the existing control regime, the 1990s reforms were ‘wider and deeper’ in nature (Sachs et al., 2000). During the 1990s, when the Indian economy underwent a structural transformation from a closed structure to an increasingly globalised one, the transition has probably led to a slowdown in productivity growth. As Virmani and Hashim (2011) put it, such slowdown would occur both in sectors and sub-sectors far from the global technology frontier (for example, obsolescence of product lines and skills) and in the aggregate in the initial stages of transition (for instance, diversion of human resource for learning new technology and markets). Once the firms adjust to the initial shock of opening up, they start experiencing the rise in productivity and output growth. Using data from 1981 till 2007, the 2011 Virmani and Hashim study examines productivity growth in Indian registered manufacturing industries and concludes that there is evidence of a J curve pattern in manufacturing output growth as a result of the 1990s reforms. Of the 22 sub-sectors of manufacturing for which the study estimated total factor productivity growth, 3 followed an S-curve pattern (14%), 8 followed a J curve pattern (36%), and 10 followed a hybrid S-J pattern (45%). Hashim et al. (2009) also found support for the J curve hypothesis and concluded that the 1990s reforms have started showing the expected positive effects on productivity and output growth in later years. Both Hashim et al. (2009) and Virmani and Hashim (2011) found a much higher growth rate in TFP in registered manufacturing in the period 2002-2003 to 2007-2008 as compared to the periods 1992-1993 to 1997-1998 and 1998-1999 to 2001-2002.

I conclude this section by reiterating the point that the high growth rate in output experienced by the registered sector may probably be attributed to the productivity growth after the 1980s reforms. As discussed above, after opening up to international trade, initially the productivity growth rate was declining as the domestic firms were trying to adjust to the intense import competition in an increasingly global market. However, at the same time, the output growth rate was increasing. So, it is not possible that the output growth in the 1990s can be credited to trade reforms.

## **3.2 Unregistered Sector and Trade Liberalisation**

### ***Dualism in Indian manufacturing: A brief background***

India has a long history of manufacturing dualism (Kathuria, et al., 2013). Like most developing countries, the unregistered sector accounts for bulk of India’s non-agricultural employment.

**Table 7: Employment in Unregistered Sector in 2009**

Country	Persons in unregistered employment	
	Thousands	% of non-agricultural employment
Argentina	5,138	49.7
Brazil	32,493	42.2
China <sup>1</sup>	36,030	32.6
<b>India</b>	<b>185,876</b>	<b>83.6</b>
Indonesia	3,157	72.5
Mexico	20,258	53.7
Nicaragua	1,024	65.7
Pakistan	21,913	78.4
Paraguay	1,473	70.7
Philippines <sup>2</sup>	15,150	70.1
Sri Lanka	3,184	62.1
Vietnam	17,172	68.2
Zambia <sup>2</sup>	920	69.5

Source: ILO (2012)

Note: <sup>1</sup> Data for China corresponds to 2010. Latest year for which data was available for Philippines and Zambia is 2008.

This dualism is a product of the industrial policies adopted by the Indian governments that, on one hand, provided protection to large manufacturing firms from external protection through import substituting industrialisation and a strict licensing policy and, on the other, protected small firms (which are mostly unregistered) through small sector reservation policy which prevented larger firms from producing specific products. The small sector reservation policy also did not allow the small firms to grow, to invest in quality upgrading and to benefit from foreign direct investment (Kathuria et al., 2013). Such policies led to an industrial structure in India where very small and very large firms co-existed in the same industry.

Labour regulations in the formal sector have also been cited as one of the reasons behind the persistence of the dualism (Mazumdar, 2010a). Wages and supplementary benefits in the registered sector are legislated by a number of Acts such as Workmen's Compensation Act (1923), Employees State Insurance Act (1948) and Employees' Provident Funds and Miscellaneous Provisions Act (1952). Consequently, wages paid in this sector are much

higher than its unregistered counterpart. Moreover, the Industrial Disputes Act (1948) requires firms employing more than 100 workers to obtain authorisation from the government for retrenchment, layoff and closure of any production unit. All these factors might have dissuaded the smaller firms in the informal sector from expansion.

Mazumdar (2010a, 2010b) say that infrastructure also plays a vital role in this context. Lack of proper infrastructure imposes extra costs on firms and may act as hindrance on their way to expansion. For instance, inadequate power supply requires firms to do lump-sum capital investments in generators for alternative electricity supply which smaller firms may not be able to afford. Chandrasekhar and Ghosh (2006) have argued that demand-side factors such as “traditional tastes” have also contributed to the persistence of the unregistered sector. Demand for traditional products such as handloom and *bidi* have their own “niche” markets which are catered to by small production units in the unregistered sector.<sup>5</sup>

### ***Trade Liberalisation and Unregistered Sector Association***

Overall, the theoretical predictions of the effects of trade liberalisation on unregistered sector performance are highly ambiguous. An exploration of the theoretical literature reveals that the effect of trade reforms can both be positive or negative depending on individual circumstances. In this sub-section, the theoretical studies in this area have been discussed and an attempt has been made to comprehend which hypothesis suits the case of India’s unregistered sector.

Siggel (2010) argues that impact of globalisation and economic reforms will be mostly felt by the registered sector because the informal sector operates in the shadow of regulations. If the registered sector is adversely affected by trade liberalisation then the sector shrinks with a rise in unemployment. This residual labour then moves to the informal sector which in turn results in a wage decline in the informal sector. Similar conclusions were reached by Fields (1975) and Mazumdar (1976) as well. However, it is unlikely that this phenomenon has occurred in India because the annual average growth rates of real informal wage has been positive in all major Indian states during the post-reform period (Marjit and Maiti, 2005). Like in any other developing country, India’s informal sector is characterised by low wages

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<sup>5</sup> Education policies have also been cited as a reason for persistence of this dualism. Modern manufacturing demands a minimum amount of skills. If the workforce is unskilled the smaller firms might find it extremely difficult to grow beyond a certain scale. Lack of basic education also acts as a hindrance in adoption of modern technologies. See Mazumdar (2010a) for a detailed discussion on this issue. See Banerjee (1983), Ramaswamy (1999) and Moreno-Monroy et al. (2012) for further discussion on dualism in Indian manufacturing.

and little or no social security where 64.7% of all non-agricultural informal workers earned below the Minimum Wage of INR 66 per day in 2004 (Mazumdar, 2010b). Hence, any deterioration in their wages would have led to an increase in poverty level in India.<sup>6</sup>

Holmes and Stevens (2010) develop a theoretical model in which small firms produce goods that are either non-tradable, or are tailored to a high-end, niche market. Their model shows that, at the advent of trade liberalisation, large firms will be more affected by trade. Even though the informal firms in India do not produce high-end goods, it is possible that their products do not compete with imported goods since they have their own niche markets (also mentioned above). If that is the case, then it is unlikely that these firms were adversely affected by import competition after the Indian economy opened up in the 1990s.

Marjit and Maiti (2005) propose an alternative linkage model and predict that, following a decline in formal-sector production, capital would be released and reinvested in the informal sector. This will result in an increase in labour demand in the latter, leading to positive effect on wages. In such a scenario, trade liberalisation will have a positive impact on employment and income in the informal sector.

Siggel (2010) discusses another model which focuses on the linkage through skilled workers. Following the downward wage pressure after trade liberalisation, some skilled workers who have worked in the factory for years and have accumulated know-how of manufacturing processes may prefer to become self-employed and start their own business in the informal sector. The impact of trade liberalisation on the informal sector will then be positive.

Outsourcing or sub-contracting of work from formal to informal sectors is another consequence of trade liberalisation. When faced with competition from cheap imports, formal firms will be compelled to cut down their costs. Hence, they may outsource some part of the production to informal firms where the wages are much lower. This model is very relevant in case of India (see Section 3.2 also). Kathuria et al. (2013) also regard the increase in sub-contracting as an indirect effect of trade reforms as expanding formal firms entered into sub-contracting arrangements with informal firms for supply of inputs, and invested in the technological capabilities of informal firms so as to obtain reliable and high quality specialised intermediate and capital goods. Moreover, informal firms would be better able to adjust their use of labour and capital in response to trade reforms as compared to formal firms

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<sup>6</sup> Percentage of population living below the poverty line (at \$1.25 a day) has declined in India from 49.4% in 1994 to 24.5% in 2011 (WDI, 2012).



because the latter face various policy-induced impediments to the adjustment of factors of production.

As seems to be the case in India, if the unregistered sector has two segments-one supplying inputs to the registered sector and the other manufacturing a final good and meeting local demands in a niche market-then its wages and employment may still rise even if the formal sector is hit by the initial adverse shock of trade reforms. A similar argument has been theoretically put forward by Marjit (2003). Using first hand field-based survey of 356 unregistered manufacturing units from West Bengal, Marjit and Maiti (2005) show that unregistered units have exhibited increasing dynamics of tying, technology adoption and growth with the advent of trade liberalisation. Besides supplying registered sector with semi-finished goods, these firms are also involved in the production of non-traded consumption goods.

Nataraj (2011) estimates the impact of India's trade liberalisation on the productivity of both registered and unregistered manufacturing firms and finds that the negative relationship between final goods tariffs and productivity is driven by the unregistered sector. Once input tariffs are controlled for, the relationship between final goods tariffs and registered sector productivity is statistically insignificant. The study argues that the main driver behind increased average productivity is the exit of the least productive small firms. Since these firms are found predominantly in the informal sector hence such exit increases the unregistered sector productivity leaving the registered sector productivity largely unchanged.

## **4. Employment and Trade Liberalisation**

### ***'Jobless' Growth***

Ghosh and Paul (2008) develop a theoretical model to show that the informal share of the total labour force goes up and that of the formal sector goes down in a developing country as a result of trade liberalisation. The study shows that if a country has comparative advantage in very few industries, which is true for most developing countries, then liberalisation will lead to job losses leading to an expansion in the informal sector. With trade liberalisation, developing nations look to promote their exports in the markets of developed countries. But if there are high entry barriers in foreign markets in the form of subsidies (for example,

subsidies provided by the European Union to their agricultural workers) then the export-led growth and employment expansion does not follow. Goldberg and Pavcnik (2003) develop a model in which a firm may hire both formal workers and informal workers. In their model, trade liberalisation leads to a decline in the number of formal workers and an increase in informal employment.

Furthermore, opening up the domestic market exposes all the domestic industries to the competition of cheap imports from abroad. This either results in the closing down of the inefficient industries which are unable to compete (and, leading to further job loss) or the existing firms engage in sub-contracting where the firms in the formal sectors outsource work to the informal sectors, as has been happening in India.<sup>7</sup> Sub-contracting helps the firms to reduce their costs since the wages in the informal sector are lower and the firms also do not have to spend on worker benefits and social security (Goldar and Aggarwal, 2012). The share of contract workers in total employment in the registered manufacturing sector increased from 15.7% in 2000-2001 to 26.47% in 2010-2011. Consequently, the share of directly employed workers fell from 61.12% to 51.53% in the same period (Kapoor, 2014).<sup>8</sup> Using econometric analysis, Goldar and Aggarwal (2012) show that import competition in the post-reform era has been responsible, to some extent, for the greater informalisation of industrial labour.

Moreover, capital intensity of the registered sector has also risen over time thus limiting its contribution to employment generation. The rise in capital intensity can be attributed to two reasons. Firstly, stringent labour regulations in India have forced firms to hire workers on temporary contracts and pushed them towards more capital-intensive modes of production (Kapoor, 2012). Secondly, reductions in trade barriers have enabled firms to import cheaper and efficient capital goods from abroad (Sen and Das, 2014).

## 5. Conclusion

The paper attempts to identify the reasons behind the differential performance of the registered and unregistered manufacturing sectors during the post-reform period. The

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<sup>7</sup> Unni (2003) opines that mostly high-productivity managerial and technologically superior activities are retained in the registered sector.

<sup>8</sup> Rigid labour laws are also to be blamed for the rise in the use of contract workers in the formal sector. See Sen et al. (2010) for a detailed discussion.

motivation of conducting the study has come from the econometric findings of Ghosh Dastidar and Veeramani (2014) that trade liberalisation has positively affected the unregistered sector performance but not that of the registered segment. As far as the registered sector is concerned, three factors, broadly speaking, explain this lack of any relationship. Firstly, it is the ‘internal’ liberalisation of the 1980s, as opposed to the ‘external’ or trade liberalisation of the 1990s, which is mainly responsible for the productivity surge and accelerated output growth in the registered manufacturing sector. To look at it in another way, the 1980s reforms were more ‘pro-business’ in nature involving industrial de-licensing and deregulations compared to that in 1990s which were largely ‘pro-market’ involving increased integration with world markets through trade promotion. Secondly, the time lag of the effects of trade liberalisation has also been a question for vigorous debate. Some studies found evidence of a ‘J curve’ effect of the trade reforms on manufacturing performance. Being an inward-oriented regime for over four decades, trade liberalisation must have led to a structural transformation of the economy where many sub-sectors have been adversely affected owing to increasing globalisation. Consequently, many studies have found evidence of deceleration in productivity growth after 1991. Such a slowdown would occur both in sectors and sub-sectors far from the global technology frontier (for example, through obsolescence of product lines and skills) and in the aggregate in the initial stages of transition (for instance, diversion of human resource for learning about new technologies and markets). Once firms adjusted to the initial shock of higher competition from foreign imports through adoption of new skills and technology, the productivity growth rate picked up again in later years. Hence, it is not unlikely that studies examining the relationship between trade and registered manufacturing growth for the initial years of reforms did not find any significant relationship between the two. Moreover, the 1990s reforms programme was gradual in nature rather than that of a ‘shock therapy’ model, as carried out in some Latin American or East European economies and that can also be a reason why we do not observe any real-time positive effects (Panagariya, 2004; Bhaumik, 2008). Finally, stringent labour regulations are also held responsible for the failure of the registered sector in taking advantage of trade liberalisation.

The case of unregistered sector invokes special interest from the viewpoint of inclusive growth. This sector provides employment to the majority of India’s manufacturing labour and is characterised by low wages and little or no social security. A descent performance by this sector would have a direct effect on the living standards of people from the lowest income

groups. That would reduce the current level of income inequality and ensure more inclusive growth. In this context, it is a desirable outcome that trade liberalisation is having a positive impact on the unregistered sector. Many hypotheses have been put forward to explain this positive relationship. The current level of empirical evidence validates the indirect effects of trade reforms through increase in sub-contracting from the registered sector during the post-reform period. Some studies also argue that increasing globalisation forced many small firms to close down their operations. These firms were mostly in the unregistered sector and, as a result, average productivity in the sector went up with the elimination of the inefficient units during the post-reform period. Moreover, absence of labour regulations might have also helped the unregistered sector re-structure itself after the Indian economy started opening up.

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