Industrial Investments in Kerala, Trends, Constraints and Future Prospects

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Abstract

Kerala is one of the least industrialised states although it has all the potential of being one. Historically speaking the state has attracted very little industrial investments especially in manufacturing. The problem has become even more acute over the last decade. The paper presents trends in industrial investments in Kerala and then attempts to provide an explanation of low investments in terms of four constraints: land, labour, environmental consciousness of the civil society and attitude of the bureaucracy. Given the constraints, the paper also delves into the type of service sector industries that the state may encourage.

1. Introduction

1.1 The industrial sector in India is one of those sectors that have been at the forefront of economic liberalization. In fact the very first formal policy document on the new economic reforms is the New Industrial Policy Statement of 1991, which sought to reduce barriers to entry by delicensing virtually the entire industrial sector. Consequently there has been a surge in industrial entrepreneurship in India in the form of a large number of new company formations (Mani, 2011). A number of new technology-based industries have sprung up over the last twenty years or so: the larger Information and Communications Technology industry, the Biotechnology and the renewed Automotive Industry are cases in point. Although the industrial investment intentions have increased, significantly, since 1991, its regional spread has been very unequal. Contrary to intuition, Orissa and Chhattisgarh have attracted the maximum amount of investment intentions during the period since liberalization. States like Kerala are at the bottom of the table: during the period August 1991 through March 2014, the state has managed to implement only 81 proposals involving Rs 1019 crores[1]. At this figure, it is only 0.19 per cent of what has come to rest of India. The fact that Kerala is not industrialized has been baffling policy makers and scholars alike. This is because the state is one of the fastest growing ones in the country in terms of growth rates in Gross State Domestic Product

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[1] Department of Industrial Policy and Performance (2014 a)

(GSDP). With a large chunk of remittances being received from Keralite workers in the Middle East, the state also ranks number one in monthly per capita consumption expenditure. Further, the state has a highly literate work force. The relatively speaking high migration rate from Kerala, both internal and international, would have made it easier for Keralites to gain access to new ideas about industrial ventures etc. Further, the state has been ranked very high in terms of certain investment climate survey (India Brand Equity Foundation, 2013). But, on the contrary, the degree of entrepreneurship from the state is at a very low level and it has continued to be so for a very long time. This is despite the fact that some of the most successful companies in India have been established and run by Keralites, but of course, located outside the state or outside the country [2]. Further the rich natural resources, which the state is blessed with, Natural Rubber for instance, the state does not have any serious value adding activities in these resources.

1.2 Rest of the paper is organised as follows. Section 2 has a brief but critical engagement with the literature, which attempts to explain the so-called 'industrial backwardness' of the state. Section 3 attempts to map the prevailing industrial structure of Kerala in terms of various quantitative aspects. Section 4 traces the trends in actual industrial investments to the state after 1991 and attempts to show that the state has very little industrial investments both in an absolute and relative sense. Section 5 lists our own explanations for the low level investments in the state. Section 6, given the constraints to industrializations, discusses the prospects of three industries in which the state has considerable investment potential. Section 7 sums up the main findings of the paper and identify some policy prescriptions for improving the industrial investment climate in the state.

II. An engagement with the literature on Kerala's industrial sector

2.1 One of the earliest studies on Kerala's industrial sector is by Subrahmanian and Pillai (1986). The study is almost entirely about explaining the industrial performance of the state during the decade 1969-1979 when value added of the factory sector in Kerala grew considerably less than the all India average. The researchers then attempt to provide some explanations

[2] Although there a number of such successful ventures mention must be made of MRF, which is the leading automotive tyre company in India and Lulu Hypermarket, which is one of the leading multi brand retailing units in Middle East and Africa. Keralite entrepreneurs established both these enterprises.leading automotive tyre company in India and Lulu Hypermarket, which is one of the leading multi brand retailing units in Middle East and Africa. Keralite entrepreneurs established both these enterprises.

for it. They find no empirical justification for the popular hypothesis that regional factors as exemplified by high wage costs and militancy of trade unions are the real reasons for this industrial backwardness of the state. On the contrary, they find that Kerala has one of the lowest wage rates and the share of wages in value added has been decreasing over time. Therefore discounting the negative impact of region-specific factors they find more evidence in support of an industrial structure hypothesis. The hypothesis is that Kerala's industrial structure is dominated by slow growing natural resource-based industries like food products and chemicals etc. and it is this inability of the state to diversify itself into fast growing industries that has kept its industrial structure locked-in a set of slow growing ones. In short it is the structure of industries in Kerala that causes the industrial growth rate in the state to diverge from the national pattern. Engineering industries, which are usually very dynamic, does not have any sizeable presence either in terms of employment or value added. Given the structure of industries there was very little scope for inter-industry linkages and agglomeration economies. A similar view is expressed by Thomas (2005) as well although in a more forceful manner by tracing the path-dependent nature of industrialization in the state. Albin (1990) who also analysed the divergence in the growth rate of Kerala's manufacturing sector from that of other states and all India reached the conclusion that regional factors are far more important than structural factors in explaining this observed divergence in Kerala's growth performance from the national pattern. The main contribution of her study is that she broadened the structural factors to include apart from industrial composition, variations of the industrial sector in terms of its organisation- household industries, organised industries and size of factories. Although the study identifies regional factors as the main explanatory variable, it does not, however, spell out the regional factors in great detail. In short the existing literature is primarily concerned with explaining the divergence in the rate of growth of the manufacturing sector in Kerala from the growth performance of the sector in India as a whole. It does not, however, discusses neither trends in investments in the industrial sector nor it attempts to provide explanations as to why Kerala does not attract much industrial investments not just in the recent past but historically as well. In fact our argument is that the concept of industrial backwardness of the state used in the literature is a misnomer as it refers to an

economic status (outcome) as reflected in outdated technology/industries[3] . The main problem of the industrial sector in Kerala, in our view, is the inability of the state to attract sizeable chunks of investments especially at a phase when industrial investments in the country have been rising. This is really the gap in the literature that the present paper is seeking to fill in. It does this in two broad stages. First, it shows, in very clear terms, that Kerala has received very little industrial investments both in terms of proposals and then in terms of conversion of these proposals to actual investments on the ground. Second, it attempts to provide some explanations for this state of affairs. While doing so, it re evaluates some of the already expressed hypotheses in the literature by confronting it with fresh empirical data.

III. Profile of Kerala's current (c2012) industrial sector

3.1 The manufacturing sector in Kerala is very small as it accounts for only about 8 per cent of the Gross State Domestic Product (State Planning Board, various issues). It is also small when compared with the country's manufacturing sector (Table 1). Within the manufacturing sector, the unregistered one has a large share [4]. The growth performance of the sector too has been erratic with violent year-on-year fluctuations in its growth rate. On an average the manufacturing sector in the state has grown at a lower rate at 5.17 per cent in nominal terms during the period 1998-99 through 2011-12 than its counterpart in India as a whole, which grew at around 12.18 per cent in nominal terms (Annexure 1). However the sharp year-on-year fluctuations in growth rates of the manufacturing sector in Kerala dents our faith in these average growth rates. In short, the organized manufacturing sector in Kerala is very small, both in absolute and relative terms.

3.2 Two hypotheses have been put forward to explain the missing middle phenomena. The first one is in terms of labour regulations, where factories tend to remain small by employing contract workers or through sub- contracting as a way of escaping from labour regulations that may kick-in when the factory crosses a certain threshold (in terms of employment). Empirical evidence for this evasion of compliance (with regulations of

[3] Private communication with M H Suryanarayana

[4] The unregistered sector account for, on an average, 57 per cent of the GSDP of the manufacturing sector

Factories Act) has been found by Chatterjee and Kanbur (2013) and Ramaswamy (2013). The second hypothesis is in terms of factories adopting labour saving technologies and thus becoming smaller in size over time. The latter hypothesis has not been subject to any detailed empirical scrutiny. A proxy for measuring this is the capital to output ratio. An improvement in this ratio (implying smaller units of capital to produce one unit of output) indicates improvement in efficiency that can be the result of the factory adopting less labour-intensive technologies. In the case of Kerala this ratio has declined over the years from 0.29 in 1998-99 to 0.14 in 2011-12 implying technological improvements. We must add that this is a preliminary finding and it requires some additional testing before we can reach firm conclusions as to which of the two hypotheses is more applicable in explaining the reduction in factory size over time.

IV. Trends in industrial investments in Kerala

4.1 All these have meant that Kerala has remained industrially speaking stultified. We measure industrial investments in terms of the number of Industrial Entrepreneur Memorandums (IEMs)[5] registered with the Secretariat of Industrial Assistance (SIA) within the union Ministry of Industry and Commerce rather than in terms of Gross Fixed Capital Formation as the former gives us data on both proposed and actual investments (Annexure 2), but essentially in large industrial ventures. Moreover the data are available across all the states, month-wise, and are available for the most recent period[6]. The IEM data on proposed and actual investments are published by two sources: for large enterprise sector it is by the SIA[7] and for Micro, Small and Medium enterprises (MSME)[8] it is by the Development

[5] Although consequent to the New Industrial Policy Statement of 1991 an industrial license is not required for establishing an industrial undertaking in almost all industries, any unit exceeding a threshold level of investment of Rs 10 crores in the case of manufacturing and Rs 5 crores in the case of service industries is required to file an IEM with the SIA. (http://www.doingbusinessinmaharashtra.org/Industrial_Entreprenuers_Memorandum.aspx). It is also clarified that an IEM 'was intended purely for statistical purposes and to conduct a limited post-facto check to see whether the proposed manufacturing activity requires an industrial licence or not. It was also clarified that the procedure was not in the nature of any registration involving scrutiny of the memorandum, etc.'. See the Press Note from the Ministry of Commerce and Industry, http://pib.nic.in/newsite/erelease.aspx?relid=79736 (accessed on May 30, 2014).

[6] For instance in May 2014, data are available up to March 31, 2014. See SIA Statistics, http://dipp.nic.in/English/Publications/SIA_Statistics/SIA_Statistics.aspx, (accessed on May 30, 2014).

[7] The data for large ventures are available in Department of Industrial Policy and Performance (2014a and b)

[8] The data for the MSME sector are available in Development Commissioner for MSME (2014).

Commissioner MSME . There are two major differences between the two sources of data. First the SIA data is available from 1992 onwards (although the data from 1992 to 2007 is cumulative and then year-wise from 2008 onwards) where as the MSME data is available only from 2007-08. Second, the SIA is available in both number and value of IEMs proposed and implemented while the MSME database reports only the number of EMs proposed. The quality of IEM data has been called into question. An IEM has two parts, A and B. Part A refers to proposed investments and has to be filed with Secretariat of Industrial Assistance (SIA) of the Department of Industrial Policy and Performance while proposing investment in an industrial undertaking and Part B has to be filed again with the SIA at the time of commencement of commercial production after the proposed investment project has been implemented. Nagaraj (2002) is of the opinion that while entrepreneurs seems to be adhering (relatively speaking) to the filing of Part A of IEMs in larger numbers; they appear to be less regular in filing of Part B. This means that while the data on Part A that refers to investment intentions are more reliable, Part B that refers to actual investments is less reliable. Given this, we have used both proposed and actual investments while we analyse the investment data for large enterprises and proposed investment data for MSMEs. We discuss the findings from the two sources separately as they deal with two separate types of enterprises in terms of investment thresholds.

4.2 Investments in the large enterprise sector

4.2.1 There has been considerable concentration in the distribution of industrial investments across the different states in the country. The Herfindhal Index computed on the basis of state-wise shares in industrial investments increased from 0.135 during 1992-2008 to 0.253 during 2008-2013. This substantiates the concentrated nature of industrial investments happening only in a few states within the country leading gross regional imbalances in the degree of industrialization. One third of the total investments have been accounted for by Gujarat and two-thirds of the total is by just five states. These five states are Maharashtra, Gujarat, Tamil Nadu, Andhra Pradesh, and Karnataka.

4.2.2 Kerala, as noted earlier, attracted very little industrial investments since the onset of economic liberalization (Annexure 3 for proposed and

Table 4 for actual investments). Her record on this is very poor both in the absolute and relative senses of the term. However there has been a significant jump in proposed investments (Annexure 3) in 2013, which is very likely to have been precipitated by the Emerging Kerala investors' meet of September 2012. Success will very much depend on the conversion of these proposals to actual investments. In fact to make matters worse, no large industrial projects were implemented since 2007 (excepting for 2009).

4.2.3 Foreign companies too have shied away from the state and according to recent data from the Secretariat of Industrial Assistance[9], Kerala has attracted only 981 million dollars of FDI equity inflows which works out to about 0.5 per cent of FDI (cumulatively during April 2000 through March 2014), that has come to rest of India.

4.2.4 But there is a silver lining in the cloud. Kerala has a better record in implementing its industrial proposals than the national average. During the period 1992 through 2013, Kerala has managed to implement 13 per cent of its proposals while the national average is 11 per cent. Similar figure for Andhra Pradesh is 15 per cent while that for Tamil Nadu it is 8 per cent and Karnataka a mere 7 per cent. It is of course disheartening to note that a large number of proposals are not taken to its logical conclusion. The precise reasons for this huge failure rate in project implementation needs to be researched into.

4.3 Investments in the MSME sector

4.3.1 Investment proposals at the MSME sector has hardly shown any growth and on an average it formed only about 5 per cent of what has been proposed for the country as a whole (Table 5). Kerala's share in total MSME proposals in the country has come down over time and it has registered sharp year-on-year fluctuations. Further a lion's share of these proposals is in the micro sector: in 2012-13 about 95 per cent of the total proposals are in the micro sector.

4.3.2 Given the low industrial investments, both proposals and actual, the number of working factories in the state has remained virtually constant at around 18000 or so (Figure 2)[10].

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[9] See Secretariat of Industrial Assistance (2014)

[10] These numbers on the number of factories are at variance with those reported for Kerala under the Annual Survey of Industries (ASI). According to this the number of factories (or industrial plants) in India increased from 4703 to 7031.

4.3.3 However the central government's investment in central public sector investments has risen from a stock of Rs 1074.44 crores in 1987 to Rs 31460.19 crores in 2013 and Kerala's share of the total went up from 1.58 to 2.06 per cent (Department of Public Enterprises, 2014, p.42). It is interesting to note that during the same period Tamil Nadu's share went up from 4.44 per cent to 7.17 per cent. It could, of course, be argued that these investments are more in response to political lobbying rather than for economic reasons.

V. Constraints to manufacturing investments

5.1 Several reasons have been adduced for this state of affairs. The ranking of these so-called constraints have varied over time. The constraints are land, labour, quality of bureaucracy and the attitude of civil society towards the negative externalities of industrial production such as air and water pollution, deleterious consequences on the water table etc. It is worthwhile to examine these constraints in some detail, as the sorting of these is a necessary condition for more entrepreneurship to flourish. This will also help us to understand as to why only entrepreneurship mostly based on services industries has flourished in the state.

5.2 At the top of the list is availability of land. Kerala's population density at 859 people per square kilometer (2011 census) is almost two and half times that of the all India average. Further, given the nature of cultivation, the opportunity cost of land in Kerala is, relatively speaking, very high. Both these factors combined increase the pressure on land to such an extant that there are severe shortages of land coupled with very high price if and when it is available. A manifestation of this pressure on land is the recent controversy on the 'Smart City Project' which has suffered a time overrun of nearly four years as the acquisition of land, its price and other conditions attached to its lease had become a major bone of contention between the party's involved. In fact the lack of availability of suitable land and its price has now become a major constraint for especially establishing large sized manufacturing firms. To overcome the problem of land availability, an earlier Industrial policy has recommended the creation of a land bank but hitherto this has remained as a mere proposal.

5.3 The second constraint, which in fact used to rank very high earlier, is labour. While Kerala labour is skilled and relatively speaking better educated, is known for being more conscious of their rights than their responsibilities. The result is that they can resort to strikes and other forms of unrest even for the simplest of issues. Historically speaking the labour has acquired a bad image of being termed as recalcitrant. Many analysts now dispute this proposition by pointing to the lower strikes and lockouts in the state compared to her neighbours although the interpretation of these numbers which are usually on total basis than on a density basis. Even in 2009, according to an Assocham study (Jaggi, 2010), the state continues to be the 5th top ranking state in terms of the number of mandays lost due to strikes and lockouts. However the density of industrial disputes (measured in terms of the number of strikes and lock outs per 1000 employed workers) in Kerala compared to the national average has tended to come down, although over the last three years the density has remained more or less constant (Figure 3).

5.4 Despite the fact that the militancy among the labourers have decreased over time, the bad image about their past behaviour continues to exert a negative image and a sort of psychological fear among prospective entrepreneurs. Successive state governments have sought to dispel this rather bad image about labour through massive public relations exercises. Nevertheless an aspect of labour that is still worrisome is the nature of casual labourers who are typically employed for loading and unloading operations. Despite the existence of legislations governing their employment, like the Kerala Head load Workers Act of 1978; there are several episodes of their behavior causing hardships of sorts to entrepreneurs. So the bad label on Kerala labour has stuck on and has not changed or improved with the passage of time. A still another aspect of labour is the issue of wage rates. Successive researchers have tried to show that the wage rates of organized factory workers in Kerala is not very high especially when compared to her southern neighbours like Tamil Nadu and Karnataka. Moreover as can be seen from Figure 4, wages rate and labour productivity (as measured by value added per worker), over the years, have moved in tandem with the zero-order correlation coefficient between the two working

out to almost + 0.89. This implies that increases in wage rates have been accompanied by increases in labour productivity[11].

5.5 However this hides an important dimension of labour productivity, namely that Kerala has the least labour productivity when compared with the more industrially advanced states in the country and indeed when compared with the all India average as well. See Table 6.

5.6 Moreover Kerala has also the highest absenteeism rates (Figure 5) among its labour force for almost all the years and this absenteeism is related to personal reasons like sickness etc. and not due to strikes, lockouts or suspension[12]. Perhaps this high rate of absenteeism is related to the high incidence of morbidity that Kerala suffers from[13]. Further another important criterion for entrepreneurs as far as wage costs is concerned is the share of wages in value added (Figure 6). This also is the highest for Kerala, with wage share working out to almost a quarter of value added as compared to just about 10 per cent or so for India as whole. This is in sharp contrast with the country as a whole where analysis of the most recent data (2011-12) for the organized manufacturing sector shows that that the share of profits in value added is as much as 46 per cent (Pandey and Shetty, 2014). In short we have a complex situation where while the wage rates in Kerala are lower, on both labour productivity and in the share of wages in value added Kerala does not compare herself favourably with the other states. All these refer to what is inside the factory. However, industrial ventures will also have to rely on the services of casual labourers especially for loading and unloading operations etc. The wages for these occupations are also typically high in Kerala when compared with other states.

5.7 Third, is the nature of bureaucracy in Kerala, which with its limited exposure to ways of doing business with industrialists is not used to doing things like granting various permissions on time. While the state claims to

[11] We did also compute the unit labour costs for Kerala and India during the period 1999-2000 through 2011-12. The unit labour costs for Kerala has more or less remained constant at about 3.93, while those for India has come down from 7.43 to 5.5 However, paradoxically Kerala's unit labour costs are only about 55 per cent of the all India average. This calls into question some doubts about the average wage rate for industrial occupations, as the wage rate for all other occupations including that for casual workers is significantly higher in Kerala than anywhere else.

[12] Absenteeism rates represent percentage of mandays lost due to absence to the corresponding total mandays scheduled to work. See Labour Bureau (various issues).

[13] The high incidence of morbidity in Kerala compared to India (25 per cent in Kerala compared to 10 per cent for India) has been pointed out by several researchers. See Panikkar and Soman, Kannan et al (1991) and Suryanarayana (2008)

be having introduced a single window clearance system, in actuality it appears to be a very large single window! Further, there are also very many instances of corrupt practices[14] and hence the common saying that even if you pay bribes in Kerala, the bribe is taken but the task remains unfulfilled. The bureaucracy with its limited experience is not very pro active and this also puts off potential entrepreneurs. So in short it becomes a vicious circle with limited contacts with entrepreneurs leading to limited experience which in turn leading to limited investments. One of the strategies envisaged in the recent Industrial and Commercial Policy 2011[15] is to 'create an effective 'Single Window Clearance' mechanism for speedy approval and statutory clearances to new enterprises'. But we do not have any empirical evidence that an effective clearance mechanism has been put in place. The best quantitative indicator about the effect of bureaucracy is the ease of doing business dataset compiled by the World Bank. Although this is usually at the national level, in 2009 the agency estimated at the sub national level across 17 cities in India that included Kochi from Kerala as well and in terms of starting a new business, Kochi had the 16th rank out of a possible 17. See Table 7.

5.8 The main factor that lowered Kerala's rank was the time taken to get the various permits to start a business.

5.9 The fourth factor that has a bearing on the level of entrepreneurship is a heightened sense of environmental consciousness among civil society members. The 'Plachimada issue' involving the MNC, Coca-Cola is a case in point. While in this specific case the evidence seems to have been overwhelmingly against the bottling plant in terms of its actions having a deleterious consequence on the water table, even here scientific opinion has been divided. There are many other less publicized incidents where local people have effectively managed to close down so called polluting factories[16] and more often than not these closures have been the result of violent outbursts. This environmental consciousness has also the consequence

[14] It must, however, be added that Kerala is perceived to be one of the least corrupt states in the country. However this perception has been dented by a number of high profile scandals involving civil servants and politicians that have been in the news recently.

[15] See http://www.kerala.gov.in/docs/policies/draftic_policy11.pdf (last accessed May 23, 2014)

[16] See Staff Reporter, 'Mob vandalizes clay company', The Hindu, November 17, 2008, http://www.hindu.com/2008/11/17/stories/2008111757710300.htm (last accessed May 23, 2014). More recently one more chemical company has met with the same fate. See Kerala Bureau, 'NGIL suspends operations after alleged proof of pollution found', The Hindu, October 13, 2013, http://www.thehindu.com/news/cities/Kochi/ngil-suspends-operations-after-alleged-proof-of-pollution-found/article5229492.ece (last accessed May 30, 2014)

of the local vigilante being an effective antidote to erring industrialists much more than the legal instruments instituted by the state.

5.10 Apart from these constraints the quantity and quality of physical infrastructure has also acted as an impediment. In order to improve this, the state government has an explicit policy on public-private partnership[17] and has been promoting a number of industrial parks on a public-private partnership mode. Hitherto the Kerala Industrial Infrastructure Corporation (KINFRA) has developed ten such industrial parks. But there is no secondary source information about the actual performance of these parks in jump starting entrepreneurship.

5.11 Of the various, electricity and the quality of roads stand out requiring improvement. Regarding electricity, the state has been, by and large, dependent on one source, namely hydro electric (almost 70 per cent). The state has a total installed capacity of 2657.24 MW, but the transmission and distribution loss is as much as 16 per cent. Given the rather excessive reliance on hydroelectric sources and the monsoons being erratic the state no longer enjoys a situation of having enough electricity generation to satisfy power hungry industries. The poor maintenance of the 23,000 KMs of road length under the Public Works Department (PWD) meant that much of it is not navigable for say easy movement of large container trucks and in addition the accident rate[18] with its unfortunate and near exponential increase had made the matters worse. Although successive governments have been attempting to address these two issues, the poor state of affairs on both electricity and roads continue although some remedial actions as far as quality of roads are underway. Finally one must also mention the obnoxious practice of political parties declaring a general strike or *harthal* as a way of protesting against national policies like raising prices of petrol[19]. A number of working days are lost and its suddenness affects adversely industries such as tourism, which is one of the major industries in Kerala.

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[17] This could be found here, http://kerala.gov.in/docs/policy_ppp.pdf (last accessed on June 28, 2014).

[18] According to Kerala Police, the number fatalities in road accidents increased from 2710 in 2000 to 4286 in 2012, but it has since reduced to 2526 in 2013. See http://www.keralapolice.org/newsite/pdfs/Road/2010/comparitive/death_in_road_accidents_2013.pdf (last accessed May 26, 2014). This reduction may be due to stricter enforcement of traffic rules.

[19] There are no official estimates of the number of general strikes. But according to an unofficial source, a whopping 363 harthals were called either for the entire state or in specific regions during the seven-year period 2005 through 2012. See Henderson, Tony, Pressenza, http://www.pressenza.com/2012/09/india-363-hartals-in-7-years-in-kerala/ (accessed on June 3, 2014). Given the fact that a significant number of mandays are lost due to these harthals, it is high time that the Labour Bureau starts documenting it.

VI. Future prospects- industrialization through the services route

6.1 Given this state of affairs the only industrial ventures that Kerala can have are those from the services sector, which does not require much land, labour, are compliant with the environmental standards, which the civil society imposes and for which various types of incentives are available from the state.

6.2 Three such areas are in retail trade, tourism and hotels and in Computer and Information Technology (IT) services. These are the emerging industries in Kerala and most of the new entrepreneurs too are found in these three industries. Of the three, tourism and retail trade has been around for some time excepting that a number of new ventures and entrepreneurs have emerged in this sector. Tourism among the two has received strong support from the state. The Kerala Tourism Development Corporation has been at the forefront in branding and selling tourism services not only in India but also abroad. Several new innovative products have emerged apart from the traditional ones: house boats and homestays being two such new products, which offered plenty of scope for new entrepreneurs. The arrival of package tourists from the West led to a number of tour operators emerging as well. Tourism is now one of the most dynamic sectors of the state: foreign exchange earnings from tourists have been growing at a compound annual rate of 22 per cent (Table 8), but it accounts only for about 5 per cent of the total foreign exchange earnings from tourism that India has been receiving. But for the global financial crisis induced negative growth rate in 2008-09, the growth rate would have been much higher. Nevertheless the table shows that despite a continuing marketing effort the state still has not reached its potential as far as foreign tourists are concerned. There are two ways of defining this potential. The first one is by setting targets for the relative size of foreign exchange earnings secured by the state from tourism. Given the different types of tourism products (beach, backwater, hill station) that the state possesses and given the liberalization of institutional impediments (such as the new visa on arrival policy), there is no reason why the state could not achieve at least 10 per cent of the tourist earnings, which the country as a whole receives. The second way of defining this potential is to compare the size of Kerala's tourism sector to another space that is similar to the state in terms of its physical features and size. There are two important issues here, which must first be settled, and these are the

appropriate indicator of size and the comparator space that must be selected. The size of the tourism sector can be measured either in terms of its earnings (preferably foreign exchange earnings as the quality of this data is better than total tourism earnings due to its better recording) or in terms of tourist arrivals (both domestic and foreign). The former measure of size is better as it takes into account the monetary value of tourist arrivals, although state-wise foreign exchange earnings from tourism are hard to come by and there a compromise may have to made in favour of physical tourist arrivals if and when monetary values of these arrivals are not available. Regarding the comparator space we consider two spaces: a country that may be compared with Kerala and a state. Regarding the country we have chosen Sri Lanka[20] as the country has very many physical features that are similar to that of Kerala and for the state for comparison we have chosen the neighbouring Tamil Nadu. Compared to Sri Lanka, the ratio of foreign exchange earnings from tourism in Kerala to that of Sri Lanka is unity implying that state has achieved its tourist potential, but however compared to Tamil Nadu, Kerala is much lower: ratio of Kerala's foreign tourist arrivals to that of Tamil Nadu is only 0.22 (in 2012)[21] which means that there is plenty of room for Kerala to catch up. Considering the fact that the state has spent considerable investments to shoring up its distinct brand image as 'God's own country', the policy makers must strive to improve its ranking by identifying the impediments which stand in the way of the state attracting foreign tourist arrivals.

6.3 An activity that is complementary to tourism is retail trade. In fact the sectoral category trade, hotels and restaurants is the single largest one in the Gross State Domestic Product (GSDP) of Kerala accounting for as much as 21 per cent of the total. With projects like the 'Grand Kerala Shopping Festival', which happens during December-January, has now become annual feature. Within retail trade two areas account for much of the visible growth in this area, namely, textile and gold jewelry shops. A number of new entrepreneurs have sprung up with chain stores in these two areas. In fact it may not be incorrect to say that Kerala-based entrepreneurs now occupy an important position in the gold jewelry trade in South India.

[20] The quantum of tourist arrivals to Sri Lanka is adversely affected by the long and bloody internal strife that the country has undergone. Therefore the monetary value of tourism may be much less than the actual tourism potential of the country.

[21] In terms of foreign tourist arrivals Kerala is ranked 8th in India compared to Tamil Nadu's 2nd rank. See Ministry of Tourism (2013), p. 93.

However there are constant complaints of this industry falling short on Value Added Tax (VAT) collections: VAT is the main source of revenue to the state. Textile shops of various hues have mushroomed even in smaller towns. Most of them deal with ready-made garments. The recent allowing of FDI in single brand retailing has led to the emergence of a number of shops dealing with well known foreign brands. All these kinds of shops are in the franchise mode and this has given another opportunity to Kerala-based entrepreneurs to express themselves.

6.4 Apart from all these the major emerging industry in Kerala is the ICT industry. In fact the industry has come to occupy a central place in the government's industrial promotional efforts. Six reasons or factors could be invoked for the emergence of this industry. The first one is of course the opportunities provided by the ICT industry itself, as it is one of the fastest growing industries in India. The growth of especially the outsourcing market with its 'double-digit' growth rates over a long period of time has given the industry plenty of room for new entrepreneurs to express themselves. Second, the traditional hubs of IT services production in India like Bangalore, Hyderabad, Chennai etc. have more or less reached a saturation point. Hence the industry has started migrating or expanding to second tier cities like Trivandrum and Cochin. Third, right through the early 1990s, the state had identified IT services as a potential growth area for Kerala and has invested heavily in the creation of two major clusters of IT service production, namely the Technopark at Trivandrum and little later, the Infopark at Cochin. These government created clusters are a natural response of the state to overcoming the six constraints that I discussed earlier. Everything is provided under controlled conditions that the parks are nothing but a government solution to government failures in not being able to provide the right type of environment for industries to flourish. The state has also come out with explicit policies for the development of this industry: hitherto three such policies have been enunciated in 1998, 2001 and 2007. Further a draft policy has been bought out in 2011 and a number of fiscal incentives are available, Apart from this the state has directly tried to promote entrepreneurship in IT by establishing Akshya centres, by promoting e-governance initiatives and by starting technology incubators in the Technopark, for instance. Fourth, is the increasing availability of engineers from Kerala-based engineering colleges. This coincided with

the liberalization of technical education in the state. Mani and Arun (2012) has shown that even though the number of places had increased from 3000 or so in 1991 to about 45, 000 in 2011, the outturn rates have been steadily falling. Nevertheless the system churns out about 12 000 engineers or so annually. Further even those who have failed to graduate could find employment in the lower end of the outsourcing industry such as call centres and data entry operations. This increased supply of engineers have also been another important contributing factor although questions have often been raised about the quality of these engineers which can act as a hurdle for the industry to go up the value chain towards knowledge-process outsourcing. Fifth, Kerala has one of the best communications infrastructures in the country. The overall teledensity of the state stood at 106 telephones per 100 people (as on March 31, 2012) while the national average stood at 78. The sixth and final reason is the lowering of barriers to entry in the IT industry with the faster diffusion of free and open source software. This has really given a boost to entrepreneurship in IT services as young engineers with good ideas could easily go about giving commercial expression to these ideas without worrying a great deal about even unknowingly violating any Intellectual Property Rights (IPRs). In fact the recent establishment by the state government of the International Centre for Free and Open Source Software (ICFOSS) at Trivandrum is likely to give a fillip to the emergence of a number of new ventures using free and open source software (FOSS) as promotion of entrepreneurship is one of the avowed objectives of this Centre. Finally the more recent Smart City project if and when it fructifies is also expected to jump start entrepreneurship of an unprecedented nature. But to promote the ICT industry, the state had to spend considerable sums of money for not only putting up the physical infrastructure but also offering fiscal incentives in the form of capital subsidy. This incentive induced industrialization strategy has welfare consequences. This is because to promote a foot loose industry such as the ICT one, the state has to resort to taxing her citizens and passing on the benefits to a group of industrialists in the hope that it will promote employment and through the incomes such generated will have multiplier effects. Theoretically speaking none can fault with this argument, but in actuality we have very little information on these multiplier effects even to the immediate local economy. Studies ought to be promoted on this aspect as the state government is extending this incentive induced way of promoting the IT services industry to second and third tier towns within the state.

6.5 It will also be instructive to analyse Kerala's record on IT services production. Production data is not easily forthcoming, but export data does and since exports account for very nearly 100 per cent of domestic production, it may be a good proxy. In terms of IT service exports from India, Kerala is ranked 8 out of the top 10 IT services producing states or union territories- in fact a slight improvement in its rank from 9 to 8 is noticeable. Its share in total IT exports from the country has virtually remained constant at about 1 per cent (Table 9)[22].

6.6 Despite its growing importance, the database on the IT sector in Kerala is very weak. This is all the more surprising as there are a number of institutions supporting its growth and government's ability to monitor the effectiveness of its own policy instruments is weakened. Hence there are no precise estimates of the number of entrepreneurs involved. A reasonable guess based on the number of firms in the two parks and including other firms, which are located outside the parks, one is talking about a figure of about 100 entrepreneurs. The background of these entrepreneurs is also diverse, but two broad groups exist. The first and smaller group is a bunch of experienced and older set who have had considerable years of experience either in India or abroad in the IT field. Some of the largest Kerala-based IT firms are founded by these entrepreneurs[23]. The second bunch is a group of younger engineers trained in the engineering colleges in Kerala. Numerically this category is the larger one of the two. Some of the members of the latter category have gone on to establishing very innovative IT companies which are worth watching[24]. Further a number of new initiatives by young college graduates are expected to emanate from two state sponsored initiatives: the 'Startup village 'at Cochin and the incubation unit at Technopark, Trivandrum. Returning entrepreneurs from the Silicon Valley has started a few companies and erstwhile employees of public sector enterprises such as Keltron have started still another set. IT services with its growing opportunities and relatively low effect of the constraints will be an important segment in the industrial landscape of the state.

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[22] However IT service exports from Kerala has registered a very high growth rate. Exports increased from 553.12 million dollars in 2008-09 to 925.93 million dollars in 2012-13. See Electronics and Computer Software Export Promotion Council (2014), p.13.

[23] Prominent examples of these are the founders of IT firms like IBS, SunTec and Nest Technologies.

[24] Companies like MobMe wireless, which emerged as a winner in the NASSCOM Emerge 50 Innovation 2011 or QBurst, are examples of this category.

6.7 Another related service sector industry that the state has immense potential is in terms of logistics. With the existing three international airports and the International Container Transhipment Terminal at Vallarpadom and with one more airport and the Vizhinjam International Seaport under way, the industry can have strong roots in the state.

6.8 There are three areas which are emerging as important industries in Kerala. These are Ayurveda (both manufacturing of Ayurveda drugs and distribution of Ayurveda services), real estate and running of professional colleges of various sorts but predominantly in engineering education. However all the three areas are replete with, a relatively speaking, larger proportion of fraudulent pretenders that very often their activities have brought a bad name to the rest in each of the three categories. Government's regulation of their conduct has also been very superficial and tardy and the guilty has often got away with lighter penalties.

6.9 Finally, although Kerala has also the potential to be industrial haven for at least small and medium type of enterprises, its ability to attract investments from rest of India and abroad even from non resident Keralites have been tardy. There is nothing much in the state's industrial policy to sort out the constraints that we discussed earlier. Instead the policy makers in the state has been resorting to massive public relations exercises to wipe out the 'bad image' that is stuck on to it. The emerging Kerala investors meet in September 2012 was a step in that direction. However, there are a few but growing number of success stories from Kerala where entrepreneurs have struggled against odds and have created a number of interesting companies. Case studies of these successful cases are more likely to offer an encouragement to the stimulation of entrepreneurship in the state.

VII. Conclusion

7.1 Industrial investments in Kerala's manufacturing sector have been very meager. In fact the situation is so acute since 2007 that the state has attracted virtually zero investments in the medium and large sectors since that year. Our analysis shows that four constraints are in play, which has its effect in dampening the flow of investments. These are land, labour, environmental consciousness of the civil society and the role of the bureaucracy. The industrial policy of the state has taken cognizance of one of these four constraints, namely the non-availability of land. To overcome

two practical suggestions are made. The first suggestion is to establish a land bank of sorts and the second one is to establish industrial parks. Of these two suggestions, the first one is yet to be implemented while the second one of establishing industrial parks have been implemented through the public private partnership mode. The state has to make concerted efforts to lessen the negative effects of the latter three constraints if it were to promote industrialization through the manufacturing route. Lessening the effect of these three constraints require strong political will which appears to be short in supply with both the coalitions: the ruling and the opposition as well. Given the existence of these constraints and given the fact that the political will to lessen their negative impact is found wanting, the most practical option for the state is focus on industrializing through the services sector route where the effect of these constraints are expected to be less severe. The four sectors where such investments can flourish are Computer and Information services, hotels and tourism, retail trade and logistics. In fact the state is indeed focusing on the former two. In the case of the computer software industry, considerable improvement in the provision of physical infrastructure by adopting a hub and spoke model of investments to the sector has shown some considerable increases in the production of software services both in the absolute and relative senses. Tourism and hotel is yet to reach its potential limit and in retail trade political compulsions have outweighed economic ones. Promotion of organised retail trade can in fact precipitate some local manufacturing in the MSME sector. Logistics is another emerging area where the state has immense potential especially with developments in shipping that is envisaged. In case of both software and tourism, the state ought to have specific targets for its relative growth. For instance, it must strive to double its relative size (to the country as a whole) every five years. Retail trade and logistics must find a place on the policy maker's table. Finally, the database on all service sector industries in general and the above four in particular must be developed so that better planning for their systematic growth becomes possible.

7.2 Given the level of investments that can be expected in the near future, the state's youth will have to continue migrating to other parts of the country and indeed abroad for gainful employment. For the state to industrialize through the manufacturing route will remain a distant dream, but through the services route are well within the reach of the state.

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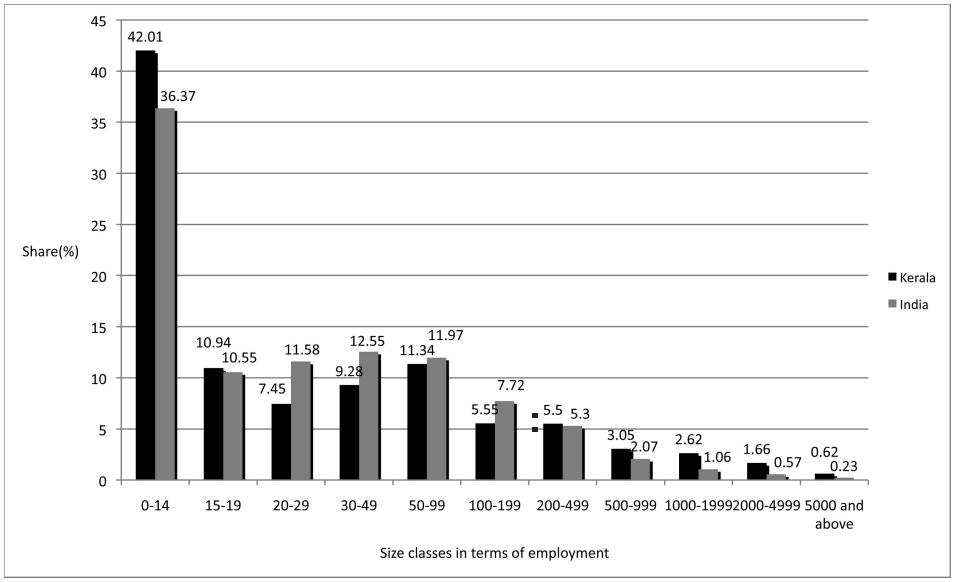
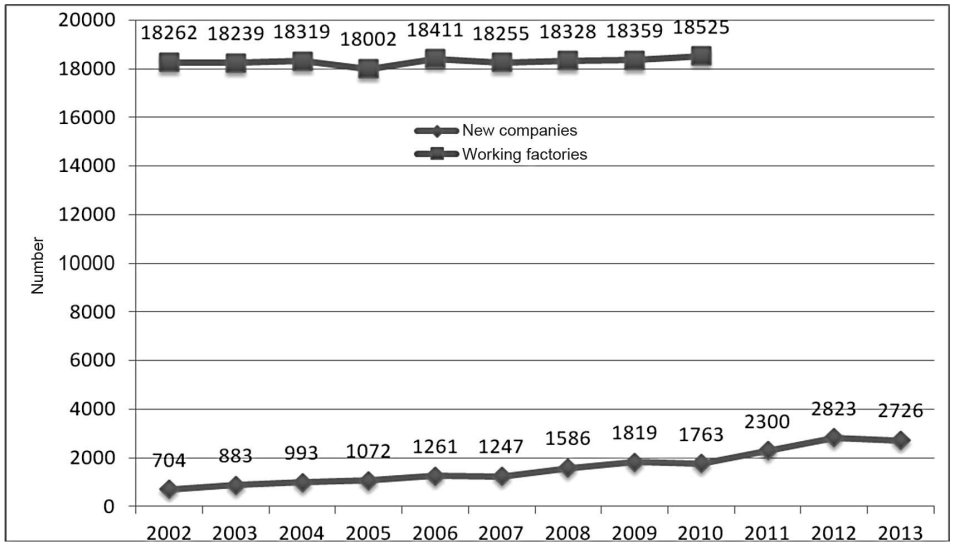
Figure 1: Distribution of factories in Kerala and in India according to size of employment, 2011-12



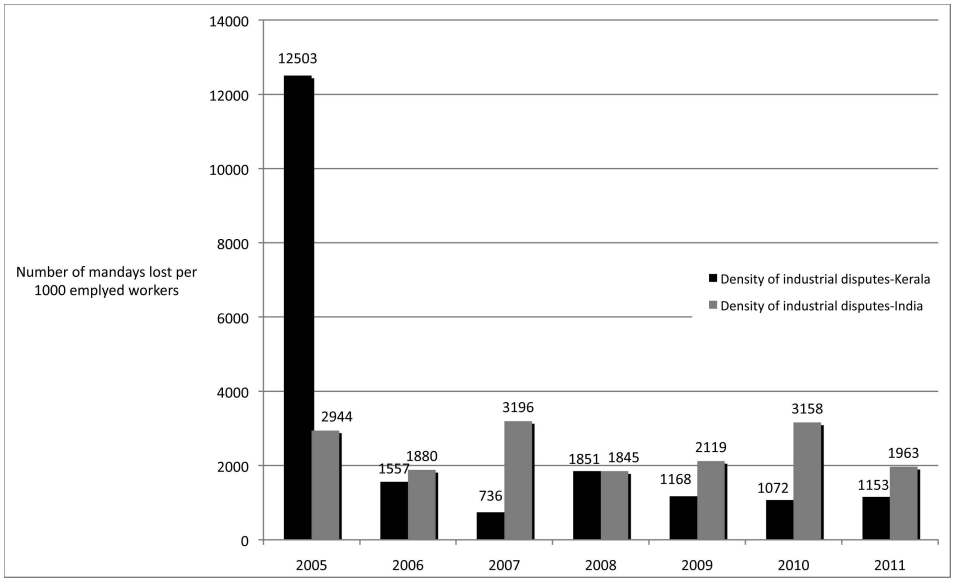
Source: Central Statistical Organization (various issues)

Figure 2: Number of working factories and new companies formed in Kerala, 2002-2013



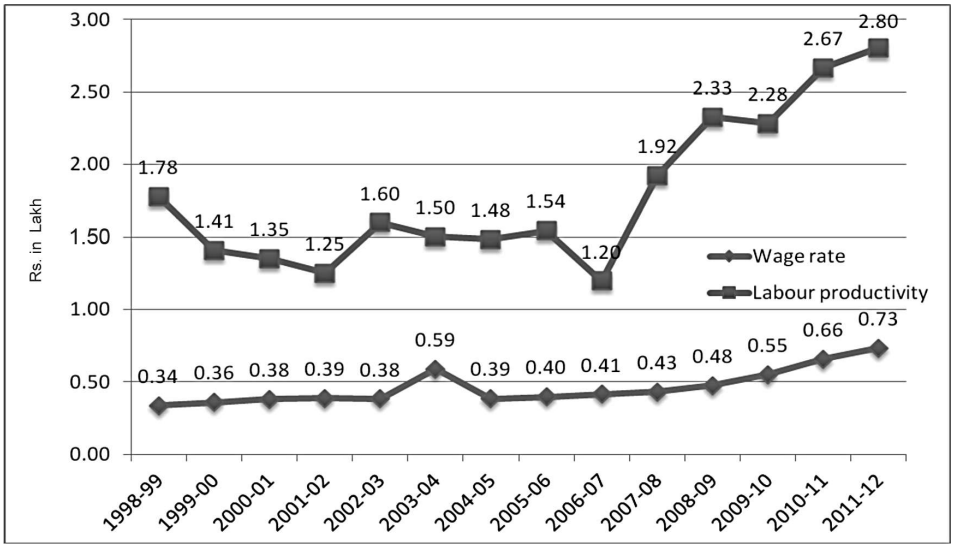
Source: State Planning Board (various issues)

Figure 3: Density of industrial disputes in Kerala compared to all India



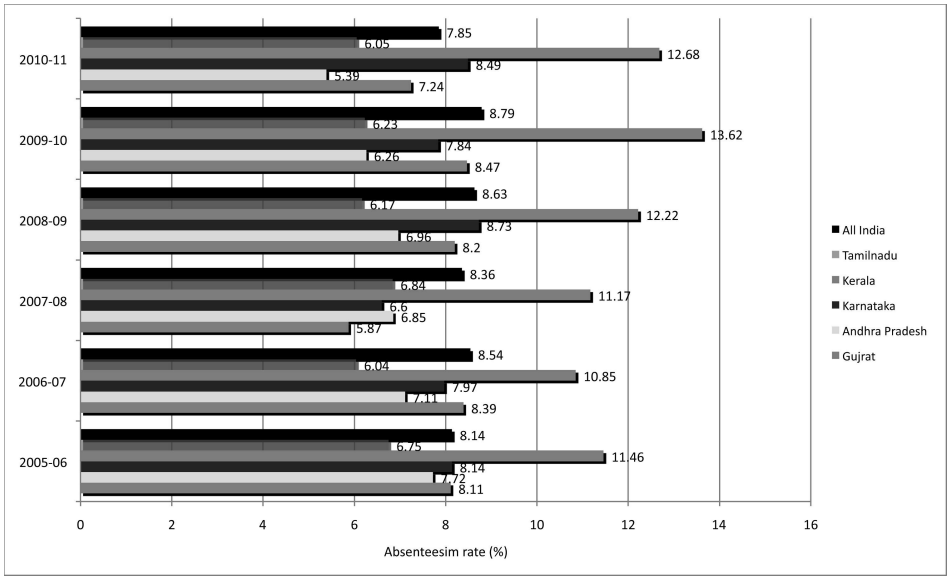
Source: Labour Bureau (2012) and Labour Bureau (2014)

Figure 4: Trends in average wage rate and labour productivity in Kerala's organized manufacturing sector



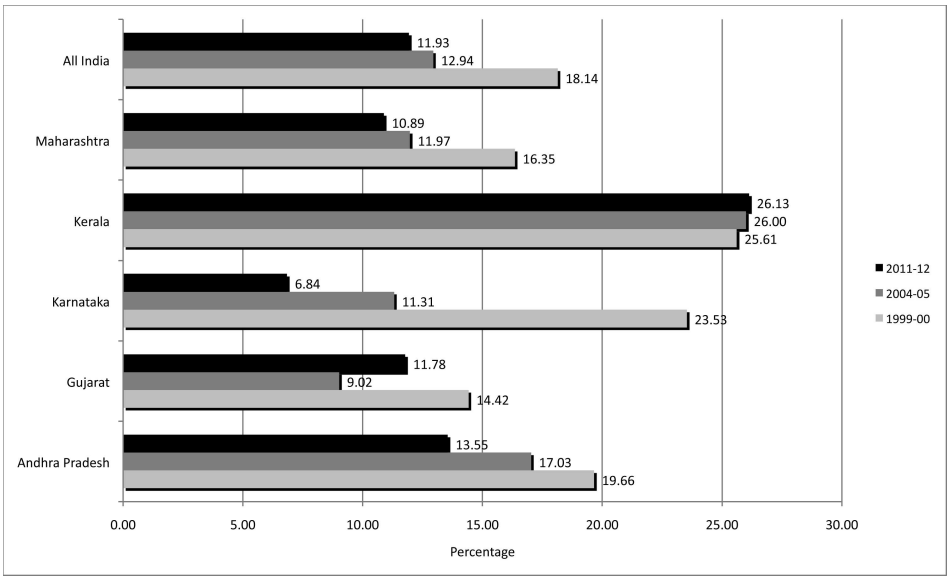
Source: Computed from Central Statistical Organization (various issues

Figure 5: Absenteeism rate in Kerala's manufacturing sector



Source: Labour Bureau (various issues)

Figure 6: Share of wages in value added : Kerala compared with other states



Source: Computed from Central Statistical Organization (various issues)

Table 1: Relative size of Kerala's manufacturing sector, 1991-92 and 2011-12 (Kerala's share in India)

	1991-92 (%)	2011-12 (%)
Number of factories	3.3	3.2
Number of workers	3.67	3.2
Fixed Capital	2.05	0.8
Value of Output	2.70	1.93
Value Added- Total manufacturing	2.08	1.68
(a) Registered manufacturing	3.02	1.1
(b) Unregistered manufacturing	1.14	3.01

Source: Central Statistical Organization (various issues)

Table 2: Organized manufacturing sector: Structure (Share in percent of Gross Value Added)

	1998-99	2011-12
Food products	19.62	18.91
Chemicals	27.01	16.18
Rubber and Plastics	6.79	13.73
Non-metallic minerals	-	6.33
Printing and publishing	-	4.70
Textiles	6.08	4.65
Coke and refined products	9.09	-
Radio, Television and Communication	5.62	-
Basic metals	4.23	
Others	21.57	35.49
Total	100	100

Source: Central Statistical Organization (various issues)

Table 4: Large enterprise sector projects implemented[1] across states, 1992-2013 (Investment figures in Rs Crores at current prices)

	1992-2006	2007	2008	2009	2010	2011	2012	2013
Kerala	1017	0	0	2	0	0	0	0
Gujarat	70588	7474	1334	2195	4565	2148	49616	15478
Maharashtra	29106	1421	2448	3499	1291	4671	7509	30266
Tamil Nadu	9638	1561	1365	1267	1374	235	524	2292
Karnataka	9009	126	750	524	1771	890	1672	4912
Andhra Pradesh	14553	1184	2148	1899	2185	2439	8411	8386
All India	**241756**	**19390**	**12465**	**14691**	**29735**	**12870**	**82156**	**78497**

Note: This is based on the number of Industrial Entrepreneur Memorandums (IEMs) actually implemented.

Source: Computed from Department of Industrial Policy and Performance (2014b)

Table 5: Investment proposals at Kerala's MSME Sector in comparison with All India and Tamil Nadu (in lakh numbers)

	Kerala	Tamil Nadu	India	Share of Kerala in India (%)
2007-08	0.11	0.27	1.73	6.40
2008-09	0.16	0.32	1.93	8.24
2009-10	0.12	0.42	2.14	5.61
2010-11	0.10	0.58	2.38	4.28
2011-12	0.10	0.70	2.83	3.54
2012-13	0.13	0.91	3.22	4.06
Average	**0.12**	**0.53**	**2.37**	**5.36**

Source: Development commissioner MSME (2014)

Table 6: Labour productivity in Kerala compared to other states (value added per worker in Rs Lakhs at current prices)

	1999-00	2004-05	2010-11
Andhra Pradesh	2.26 (0.62)	2.03 (0.73)	5.55 (0.48)
Gujarat	3.14 (0.45)	5.93 (0.25)	9.02 (0.30)
Karnataka	1.18 (1.19)	4.76 (0.31)	6.71 (0.40)
Kerala	1.41 (1.00)	1.48 (1.00)	2.67 (1.00)
Maharashtra	4.05 (0.35)	6.3 (0.23)	12.44 (0.21)
Tamil Nadu	1.67 (0.84)	2.06 (0.72)	4.52 (0.59)
All India	2.47 (0.57)	3.94 (0.38)	7.12 (0.38)

Note: Figures in parentheses indicate ratio of Kerala to other states and all India
Source: Computed from Central Statistical Organization (various issues)

Table 7: Ease of doing business across 17 cities in India, 2009 (Ranks out of 17)

Economy	Ease of doing Business Rank	Starting a Business	Dealing with construction permits	Registering property	Payin g taxes	Trading across Boarders	Enforcing contracts	Resolving Insolvency
Ludhiana	1	7	7	11	1	12	4	2
Hyderabad	2	4	4	9	13	13	1	1
Bhubaneswar	3	5	8	17	9	1	5	5
Gurgaon	4	9	2	1	7	17	14	6
Ahmedabad	5	14	4	2	11	3	16	4
New Delhi	6	1	4	7	7	14	12	6
Jaipur	7	3	13	3	2	14	7	14
Guwahati	8	13	12	14	6	7	2	12
Ranchi	9	15	9	6	4	8	11	13
Mumbai	10	12	17	5	4	3	17	3
Indore	11	8	13	10	10	11	10	9
Noida	12	6	9	12	2	16	7	16
Bengaluru	13	17	1	4	12	9	15	8
Patna	14	2	9	15	15	10	2	15
Chennai	15	10	3	16	17	2	7	10
Kochi	16	16	15	7	14	5	6	10
Kolkata	17	10	16	13	16	6	13	17

Source: World Bank (2009)

Table 8: Foreign exchange earnings from tourism in Kerala and in India (Rs in crores in current prices)

Year	Kerala	India	Share of Kerala (%)
2001	535	15083	3.55
2002	705.67	15064	4.68
2003	983.37	20729	4.74
2004	1266.77	27944	4.53
2005	1522.31	33123	4.60
2006	1988.4	39025	5.10
2007	2640.94	44360	5.95
2008	3066.52	51294	5.98
2009	2853.16	53700	5.31
2010	3797.37	64889	5.85
2011	4221.99	77591	5.44
2012	4571.69	94487	4.84
2013	5560.77	NA	NA

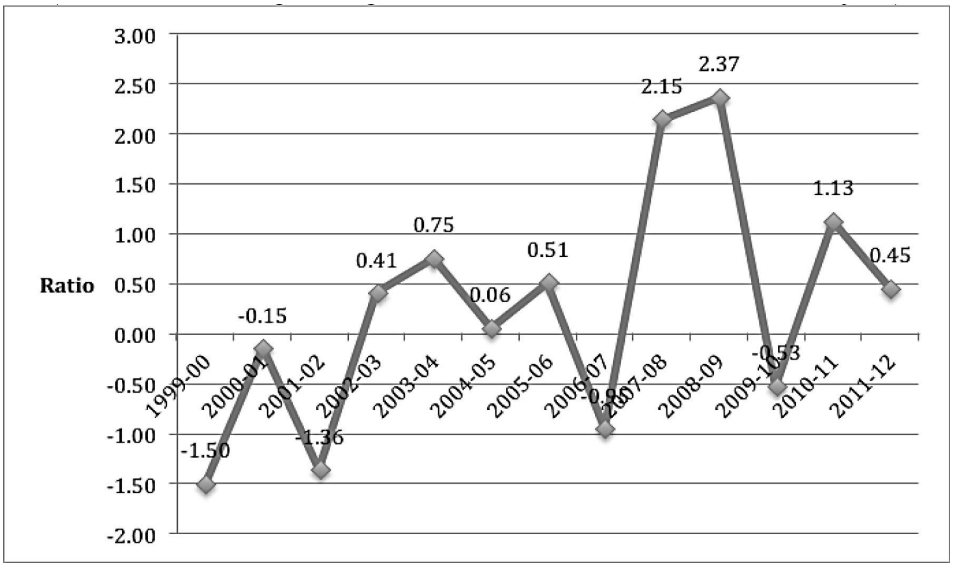
Source: Kerala Tourism (2014); Ministry of Tourism (2013)

Table 9: Distribution of IT exports from India across states (percentage shares) (Top 10 IT services exporting states)

	2008-09	2012-13
Karnataka	32.11	35.06
Maharashtra	20.41	19.48
Tamil Nadu	14.40	14.57
Andhra Pradesh	14.18	13.58
Haryana	6.36	6.91
Uttar Pradesh	4.96	5.73
West Bengal	2.41	2.77
Kerala	0.97	1.24
Delhi	2.24	1.04
Gujarat	0.57	0.62

Source: Electronics and Computer Software Export Promotion Council (2014)

Annexure 1: Relative growth performance of Kerala's manufacturing sector (based on ratio of growth of gross value added in Kerala to that of India at current prices)



Source: Central Statistical Organization (various issues)

Annexure 2: Growth performance and relative share of Gross Fixed Capital Formation in Kerala

Year	Rate of Growth (%)	Share (%)
1998-99	NA	1.850
1999-00	-28.90	2.036
2000-01	-49.83	1.411
2001-02	31.34	1.373
2002-03	-48.87	1.364
2003-04	-14.55	0.982
2004-05	43.03	1.318
2005-06	-0.91	0.780
2006-07	38.32	1.104
2007-08	-6.32	0.843
2008-09	40.61	1.117
2009-10	11.47	1.062
2010-11	-30.37	0.771
2011-12	2.14	0.650

Source: Central Statistical Organization (Various Issues)

Annexure 3: Proposed investments in Kerala and across selected states
(Based on IEMs filed, LOIs/DILs issued; Values are in Rs crores at current prices)

States	2008			2009			2010			2011			2012			2013		
	Pro	Sh	Avg	Pro	Sh	Avg	Pro	Sh	Avg	Pro	Sh	Avg	Pro	Sh	Avg	Pro	Sh	Avg
A.P	1,32,289	8.68	326.64	1,04,998	10.09	329.15	1,76,245	10.15	339.59	1,03,966	6.75	265.22	70,376	12.39	229.24	25,520	4.81	96.67
Gujarat	1,25,376	8.23	345.39	1,42,239	13.67	378.30	1,49,718	8.62	301.24	1,42,680	9.27	262.28	1,26,201	22.22	267.38	94,259	17.78	266.27
Karnat	1,42,284	9.34	677.54	92,054	8.85	514.27	1,40,289	8.08	521.52	94,147	6.11	433.86	47,967	8.45	283.83	10,050	1.90	91.36
Kerala	**269**	**0.02**	**16.81**	**171**	**0.02**	**21.38**	**99**	**0.01**	**12.38**	**3,984**	**0.26**	**332.00**	**124**	**0.02**	**20.67**	**14,624**	**2.69**	**3,566**
Mahar	92,287	6.06	128.71	68,073	6.54	114.60	1,76,259	10.15	232.23	1,33,730	8.69	137.16	70,181	12.36	131.67	53,402	10.07	118.15
Tamil	24,506	1.61	79.05	67,224	6.46	284.85	38,595	2.22	162.85	73,348	4.76	284.29	21,253	3.74	107.88	27,380	5.17	162.98
All India	**15,23,852**	**100**	**373.04**	**10,40,259**	**100**	**299.36**	**17,36,322**	**100**	**400.44**	**15,39,728**	**100**	**394.80**	**5,67,868**	**100**	**200.80**	**5,30,086**	**100**	**222.07**

Sh= Share in %age values, Avg= Average values
Source: Department of Industrial Policy and Performance (2014a)