

What Drives Entrepreneurship? Some Evidence from India

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Abstract

We study the growth of entrepreneurship in India by analyzing the micro, small and medium enterprises sector (MSME) and explore the factors that contribute to its development. We analyze a panel data of all 35 states and union territories from 1991 until 2006. The outcomes of interest are number of units, output, employment and total exports from the MSME sector. Our main findings suggest that general improvements in physical and financial infrastructure have contributed significantly more to growth of entrepreneurship in India, than specific targeted policies of the government such as financial subsidies and creation of special economic zones aimed at entrepreneurship development.

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1 Introduction

Entrepreneurship is an important area of focus for researchers and policy makers alike. The importance of entrepreneurship to employment, innovation, productivity and income growth has led to an increase in research to investigate why entrepreneurship occurs. This paper seeks to provide an explanation for what has contributed to growth of entrepreneurship in the Indian economy since economic liberalization started in 1991. We focus on entrepreneurship development within the micro, small and medium enterprise (MSME) sector which has often been termed the ‘engine of growth’ for developing economies. Within the Indian context, the MSME sector is a growing and significant segment of the economy. Based on official figures from the Ministry of MSME (2008), this sector contributes 8 percent of National GDP, comprises 50 percent of India’s total manufactured exports, 45 percent of India’s total industrial employment and 95 percent of all industrial units. Post economic liberalization in 1991, there have been major policy changes at the federal and state level aimed at consolidating and developing this sector in the country.

We analyze a panel data of all 35 states and union territories in India from 1991 until 2006. In this paper, we operationally define entrepreneurship as key outcomes of interest such as total number of firms, total output, total employment and total exports from the MSME sector in India. We estimate the impact of specific government policy interventions on growth of entrepreneurship in the MSME sector. The specific policies of interest are state outlays and subsidies which are targeted towards this sector. We focus on the total financial subsidy to the MSME sector in each state, the total investment in industrial parks and number of clusters set up for

MSMEs in each state and the total expenditure to support technology in the MSME sector within each state. The outcomes of interest are performance of the MSME sector within each state as measured by total number of firms, total output, total employment and the total exports from the MSME sector in each state.

Our main findings are that the general development in physical infrastructure and improvements in access to finance, have significantly positive impact on growth of the MSME sector in India. In comparison, the specific policies aimed at the MSME sector have basically not had any significant impact on the growth of this sector in the first fifteen years since liberalization. These results are striking because they show us the relative importance of fundamental infrastructure, both physical and financial, in the growth of entrepreneurship in a developing economy.

2 Data and Overview

In this paper, we use data from the comprehensive Annual Survey of Industries and data from All India Census of Small Scale Industries, Government of India. We will use small scale industries (SSI) and micro small and medium enterprise (MSME) sector interchangeably because in 2007, Government of India amended rules to rename the SSI to MSME ministry. We begin by looking at the size and relevance of MSME sector in the Indian economy in Table 1. The data shows that as of 2004, there were a total of 13 million micro and small firms in India. The number of firms in the MSME sector comprised a staggering 95 percent of all industrial firms in India. However, together they employed just a little over 8 percent of the total Indian labor

force which amounts to 41 million people employed in the MSME sector in India in 2004. This sector contributed 40 percent of total Indian exports and comprised a large share (45 percent) of the total manufacturing output of the country.

Insert Table 1

Moving beyond the size of the sector, we take a closer look at its composition. Table 2 highlights the decomposition of MSME units based on nature of activity. About half of all units are engaged in services (49 percent), and this number has been steadily increasing over the last two decades. When we look at the decomposition of the MSME firms into registered and unregistered units, we notice a majority of registered firms are in the manufacturing, assembling and processing space (62 percent) while a majority of unregistered firms are in the services sector (45 percent).

Insert Table 2

Studying the profile of firms in the MSME sector, Table 3 shows that a massive 86 percent of all firms in this sector are unregistered. The reason for this could be that registration is voluntary in the SSI sector. The disaggregated data shows that although registered firms comprise only 14 percent of this sector, but they have 59 percent of the total investments in this sector and they contribute 56 percent of the total production in the sector. Comparing employment across registered and unregistered firms between the second census (1988) and the third census (2002), we find that employment per firm has gone down in registered units from 6.29 to

4.48. The fixed investment per firm, however, has gone up manifold from Rs.160K to Rs.668K.

To understand the true complexity behind the sector, we have to look at other classifications. Based on the months of operation in a year, firms are further classified into perennial (92 percent), seasonal (5.5 percent) and casual (2.39 percent). Based on the type of organization, all registered firms are further classified into proprietary (90 percent), partnership (7.2 percent), cooperative (2.42) or private company (1.5 percent). Based on their location, the firms are classified as rural (55 percent) or urban (45 percent). Another classification is based on the main source of power used in the firm such as electricity (47 percent), no power needed (40 percent), oil (5.6 percent) and coal (4 percent). Another interesting fact to highlight from the data is that about 11 percent of all small scale firms are managed by women entrepreneurs. This is a significant development in a country where female labor force participation has remained low (37 percent in 2004-05) and concentrated in agriculture sector.

Insert Table 3

The MSME sector data also reveals enormous variation across states within India. When we consider all registered firms, we find that 62 percent of all working units are concentrated in six states. These states are Tamil Nadu, Uttar Pradesh, Kerala, Gujarat, Karnataka and Madhya Pradesh. The maximum number of unregistered units (17 percent) were located in one state, Uttar Pradesh, which has been traditionally considered one of the backward states in India.

Looking at the profile of firms in Table 3, we note that nearly all of them are proprietary units, both within the registered as well as the unregistered sectors. The registered units employ more than twice the number of workers as the unregistered. But this could reflect the fact that unregistered units have a greater number of temporary workers who might not show up on the pay rolls. In terms of the size of firms, measured as per unit fixed investments, registered units are nearly 5 times as large as the unregistered ones.

Next, we look at some of the variables that describe the health of MSME firms in Table 4. The most striking fact about Indian MSME sector is that a significant number of firms both within the registered as well as the unregistered sector are defined as 'sick'. Sickness is typically identified through a yardstick which includes a) delay in repayment of loan over one year (Reserve Bank of India definition), b) decline in net worth by 50 percent and c) decline in output in last three years. All yardsticks combined reveal that about 14 percent of all units in the MSME sector was identified to be either sick or incipient sick, while this was 6.89 percent for all unregistered units and 7.82 for all registered units. Even here, there is widespread variation across states and the maximum number of sick units (60 percent) are located in just 5 states of West Bengal, Kerala, Maharashtra, Karnataka and Andhra Pradesh.

Insert Table 4

Based on delay in repayment of outstanding loans from institutional sources like banks and financial institutions, 20 percent of registered firms in MSME sector and

17 percent of unregistered firms in MSME sector are classified as sick. In the total MSME sector, this percentage is about 18 percent. Incipient sickness identified in terms of continuous decline in gross output was 11.5 percent in the registered sector and 7 percent in the unregistered sector. Detailed data was collected on the various reasons for sickness of firms in the MSME sector. The most commonly cited reasons were “lack of demand” and “shortage of working capital”.

The disaggregated data on ‘health of units’ within the small scale industries reveal that the stated causes of ‘sickness’ are very similar across registered and unregistered firms.

3 Descriptive Statistics and Trends (1991-2006)

The MSME sector in India has witnessed significant changes in the post liberalization period since 1991. In this section, we will study the data from 1990 until 2006 and highlight some interesting trends and features of this sector. Figure 1 shows the number of registered and unregistered firms in the Indian MSME sector from 1990 to 2003. The first feature we note is that this sector has been growing steadily throughout this period. In 1991 there were 67.07 lakhs MSMEs in the country. Their number climbed to 113.95 lakhs by 2003. A fact that might not seem obvious from the graph is that although the proportion of unregistered units remained dominant throughout this period (86.3% in 2003-04), the number of registered firms more than doubled in number over this period.

Figure 2 shows the growth rates of the two segments, registered and unregistered,

over the study period. The growth rate for the overall industry and the unregistered segment is steady and close to 4 percent. Once again, given the dominance of unregistered firms it is not surprising that the overall industry growth rate is very closely following the growth of unregistered segment. The growth of registered sector, however, has high variance. This ranges from 14 percent growth to negative growth in few years. Except for the five years from 1995-2000, in the remaining period, the registered sector has had very high growth rates compared to the unregistered segment.

Insert Figures 1 and 2

A rather unexpected finding is when we compare the SME sector to the overall industrial sector. We notice that almost throughout the post liberalization period, the SME sector has been growing significantly faster than the total industrial sector. In 2005-06 the SME sector grew at an impressive 12.32% while the total industrial sector grew at 8.1%. The average annual growth rate of the sector (1991-2006) was 8.47% as compared to the growth rate of the total industrial sector which was 6.07% over the same period.

The total production data from the MSME sector reveals that while there has been a steady growth since the early 1990s, the growth has accelerated from 2000 onwards. There are several likely factors that have contributed to this rise in growth but the new government policy which was introduced in 1999 is believed to be the main factor. Under this wave of reforms it consolidated the administrative machinery

by setting up the ministry of Micro, Small and Medium Enterprises which subsumed the Ministry of small scale industries (SSI) and the Ministry of Agro and Rural Industries (ARI). It also introduced a unified policy for credit, infrastructure, technology and marketing. The central excise duty exemption limit was raised and the reserved product list was reduced. Following these reforms, the growth in MSME production accelerated. This was the first in a series of policy initiatives taken by the government to stimulate the MSME sector. Following this, in 2006 the parliament passed the MSME development act which is discussed in greater detail in the next section.

Insert Figure 3

Disaggregating the MSME total production data further into the two markets - domestic and export - shows some interesting patterns. Exports from the MSME sector have been growing rapidly over the entire 15 years and this has accelerated since 2000. Domestic consumption, however, has been a larger share of total product of MSME sector throughout the post liberalization period and it has accelerated significantly more than exports since 2000. This implies that the robust domestic market is fueling the high growth of the MSME sector in India.

4 Empirical Specification

We employ fixed effects panel regressions of the MSME performance outcomes on the state policies targeted towards the development of MSME sector. We run four

separate fixed effect regressions, one for each outcome – total number of MSME units in state, total MSME output from state, total MSME employment in state and total MSME exports from state. We regress these outcomes on four sets of explanatory variables - state policies targeted towards MSME development, general development policies of the state, other state characteristics and time dummy variables for each year in the panel.

Targeted state policies for MSME development include – total state financial subsidy for MSME development, total investment in industrial parks set up for MSMEs, number of clusters and parks set for MSMEs and the total state expenditure to support technology adoption in MSME sector. The general development policies of the state include - total expenditure of state on infrastructure, average labor cost per man day worked, total number of bank branches and offices in state and per capita tax in the state.

The other state characteristics that we include in our analysis are state per capita GDP and literacy rate. State income measured by state GDP is important if richer states experience better development of MSME sector due to complementarities across sectors within a state. Literacy levels in state are important if an educated workforce is more productive and if educated entrepreneurs find it easier to set up businesses.

More precisely, our empirical specification is the following

$$Y_{st} = \theta_t + \beta M_{st} + \gamma G_{st} + \delta X_{st} + \epsilon_{st}$$

Where Y_{st} is the MSME performance measure of state s at time t , θ_t is time dummy to capture any systematic variation in results over time, M_{st} is vector of policies specifically targeted towards growth and development of MSME sector in state s at time t , G_{st} is a vector of general development policies of state s at time t . Since all our observations are at the state level, we do not include state dummies. We include observable state characteristics in X_{st} .

We do the Hausman test to check for the validity of our specification. Since we are interested in testing for more than one parameter, we use an F-statistic version to implement the Hausman test (Woolridge, 2010). The Hausman statistic fails to reject the assumptions of our fixed effects model, so we focus on the FE estimates.

5 Results

Tables 5 and 6 show the results of the fixed effects regression analysis. Results column (I to IV) show the coefficients and standard deviations of the four regressions, with four outcomes of interest. Regression I shows results for 'number of MSME units in the state', regression II shows the 'total output of MSMEs in the state', regression III has results for 'total employment in the MSME units in the state' and regression IV has the results for 'total exports from MSMEs in the state'. The explanatory variables are the same in all four regressions. These include the MSME targeted state policies, the general state development policies and finally we include the state characteristics. All the four regressions have high explanatory power as is reflected by the high goodness of fit, R^2 .

Before we discuss the impact of specific policies that were implemented by state governments for the growth and development of the MSME sector, we should look for any general trend in the results based on state characteristics. Literacy rate in a state has no significant impact on performance of the MSME sector. We do however see that wealthier states, as measured by per capita income, have more number of MSME units. When we look at other measures of performance, we find no significant effect of state wealth.

Another state characteristic that we analyze in this study is the average labor cost (in Rs.) per man day worked within a state. One would expect a negative relationship if the hypothesis is that increased labor costs negatively affects growth of a sector. The growth of a sector, however, might also lead to an increase in wages and salary within the state. The data that we have for labor cost is not specific to the MSME sector; it is the average labor cost for the entire state. The results indicate that there is no significant effect of labor cost to the growth of the MSME sector, negative or positive.

Insert Table 5 and 6

5.1 Results: Impact of Targeted State Polices for Development of MSME sector

The first set of striking results is that most state policies that are targeted specifically towards the development of MSME sector have no significant effect on various outcomes of interest. This result is consistent for different targeted policy measures

such as investment in industrial parks, the number of registered clusters (SEZs) and parks as well as total government expenditure on technology support aimed at the MSME sector. The total financial subsidies which are targeted towards the MSME sector, in fact has a consistently negative effect on most outcomes of interest.

What is perhaps more surprising is the significant negative impact of total amount of financial subsidy provided by the state to the MSME sector. This is a consistent result across all the four measures of performance in our analysis as is reflected by columns I through IV. Financial subsidy to a sector is not a new scheme and has been an important policy tool used by most states in India, over a long period. One can argue that it is possible that these results are picking up reverse causality, that is, states which have poor performance of MSME sector are more likely to pump in more financial subsidy into this sector. Whereas reverse causation cannot be completely ruled out by the state fixed effect regression methodology, the consistency of the robust results across all four measures of performance gives us reason to believe that the financial subsidies going into MSME sector might actually be detrimental to the growth of the sector. More than the magnitude of the subsidy itself, these results point to the inefficient mechanisms through which the government disburses these.

One possible explanation for these non results (and negative results) is that these special policies are targeted towards specific industries such as Information and Technology (IT) and export firms and might therefore have little impact on the overall MSME sector. This is weakly confirmed when we look at column IV which has total exports from MSMEs as the dependent firm. We find that exports from MSME sector in a state has risen with more SEZs coming up in the state. We also see that

technology support has also lead to increase in total exports. These results, however, have weak statistical significance at the 10 percent level.

Another likely reason for insignificant impact of targeted policies such as industrial clusters/parks and government support for technology adoption is that the outcomes of interest that we analyze might require longer term investments. In fact, the count of parks and clusters were single figures in most Indian states until 2000 and began to grow since. It is important to bear that in mind while judging some of these recent policies. However, our results are also indicative of the impact of MSME targeted schemes over a period of ten years which is a significant time-frame in the development of any sector.

5.2 Results: Impact of General Development Polices of States

The next set of explanatory variable that we examine in understanding MSME sector performance are some of the general development policies that the state governments have undertaken over the years. Within this category of policies, we consider growth of physical and financial infrastructure within a state. The three distinct policies of the government that we analyze are the total expenditure on infrastructure development in a year, the number of bank branches and bank offices within a state and the total per capita taxes which includes direct and indirect taxes collected in the state.

The most important result is that the expenditure on infrastructure is helping growth of MSMEs significantly, for all measures of MSME performance. This is reflected in the positive and significant coefficient on the total expenditure variable for each regression, I to IV. Better infrastructure is helping increase the number of

MSME units, it is increasing total outputs from the MSME sector, increasing the employment within this sector and raising exports from this sector significantly. The results are strong, and along expected lines, since infrastructure has been one of the biggest bottlenecks to growth in India. Several state governments have increased their infrastructure outlays in recognition of this severe problem. The central government too has undertaken massive infrastructure development programs trying to connect different parts of the country. In this paper, we do an aggregate analysis combining rural and urban MSME sector. It would, however, be interesting to see if development of infrastructure has affected the two segments differentially, given that urban areas in India have better infrastructure as compared to the rural parts within a state.

The other variable which has strong explanatory power on the growth of MSME sector, is the growth of financial access in the form of number of bank branches and bank offices within a state. As the results indicate, this has a positive and significant impact on MSME performance as measured by the various outcomes. Access to finance, measured by number of bank branches and bank offices, leads to increase in the number of MSME units, raises per unit output and employment and increases the total exports from the MSME sector in India for this time period. These results prove that with improved access to finance, the MSME sector has undergone a significant development in the various states over the period 1991-2006.

Taxes don't seem to make any difference to the MSME sector. As the coefficients indicate, there is no significant positive or negative impact of taxes on entrepreneurship within this sector. The total number of units and total employment seem to be negatively related but this relationship is not statistically significant.

6 Discussion of Results

The main story underlying these results points to the fact that while state governments devise special policies targeting the growth of the MSME sector and spend significant resources through these, it is in fact, the general development policies which are having big impacts on the development of the MSME sector. Our results indicate that improving general access to finance has a bigger impact on the growth of the MSME sector than targeted financial subsidies to the sector. Broader improvements in physical infrastructure goes much further in development of MSME than setting up special economic zones for the sector.

It is also noteworthy that not all the specific policies which have been implemented targeting the MSME sector have had similar effects. While most schemes have fared poorly in terms of the outcomes that we explore, setting up parks and clusters and expenditure on technology support have had a significantly positive impact on exports from the MSME sector in the country.

The result which is particularly interesting is the one of financial subsidies to the MSME sector. We find that pumping more financial subsidy into a sector is not necessarily the best way to encourage the growth of a sector. In fact, the results reveal that these targeted subsidies have been detrimental to the growth of the MSME sector in India. This result conveys deeper insights when we juxtapose it against the impact that presence of bank branches have on MSME development. Banks as well as government financial subsidies are ultimately aimed at improving access to credit for entrepreneurs. But the subsequent impact that they have are opposite to one another, and consistently for all measures of entrepreneurial outcomes. While banks

improve the growth of MSMEs, the government subsidies are negatively related to all performance measure of MSMEs.

One possible explanation for the opposing effects that the presence of banks and financial subsidies have, could be the nature of credit targeting. While banks are providing finance to viable businesses, government subsidies might be channeled into unproductive and non-feasible ventures. Contract theory would also point to various other explanations such as moral hazard and adverse selection problems when credit is available at below market rates. This would then strongly suggest that the role of the government should be of a facilitator that improves access to finance by encouraging more banks and other financial institutions to enter the local markets, instead of becoming an active player itself and disbursing credit.

Another insightful comparison is looking at the impact of government's infrastructure outlays and its total spending on financial subsidies to the MSME sector. They have opposing impacts on performance of the MSME sector. While infrastructure outlays are significantly improving MSME growth, the financial subsidies have a significant negative impact on MSME growth. This is suggestive of the core competence of a state government. Once again, instead of disbursing credit directly, the government is better suited to support the growth of the MSME sector through creating a conducive environment by improving connectivity by roads, railways and airways, and by improving the availability of electricity and water supply.

7 Conclusion

In this paper, we have looked at growth of Indian Micro Small and Medium Enterprise Sector over the period 1991 to 2006. The MSME sector has often been termed the ‘engine of growth’ for developing economies. We begin with an overview of this sector in India and look at some recent trends which highlight the development and significance of this sector vis-à-vis the Indian economy. Over the last few years, there have been major policy changes at the federal and state level aimed at consolidating and developing this sector.

We critically analyze government policy interventions on the growth of entrepreneurship in the MSME sector in India. The policies of interest that we study are state outlays and subsidies directly targeted at enterprise growth and those which are general development policies such as improving financial and physical infrastructure in the country. More specifically, we analyze the impact of total financial subsidies to the sector, total state investment in industrial parks and clusters aimed at this sector and the total state expenditure to support technology within the MSME sector. We do a state level analysis based on data from 1991 until 2006 and study some key outcomes of interest such as total number of units, total output, total employment and total exports from the MSME sector.

Our main findings are that while specific policies that are aimed at the MSME sector have limited impact on the growth of this sector, more general development policies such as expenditure on infrastructure and access to finance have significantly positive impact on growth of enterprise in India over the first 15 years of liberalization. The results suggest that the government’s role in developing entrepreneurship

is to be a facilitator rather than an active player in the MSME sector. Creating an enabling environment by improved connectivity, availability of electricity and water supply as well as improving access to finance by encouraging more banks and other financial institutions to enter local markets, have far greater impact on growth of entrepreneurship than direct subsidies and handouts to MSME firms in India.

References

- [1] Baumol, J. William. 1968. "Entrepreneurship in Economic Theory." The American Economic Review. Vol. 58, No.2, Papers and Proceedings.
- [2] Annual Reports, Ministry of Small Scale Industries, Government of India
- [3] Wade, Jessica (2008). "Micro, Small and Medium Enterprises Development Act – Background Paper". Small Enterprise Finance Centre, IFMR
- [4] Woolridge, J. (2010) Econometric Analysis of Cross Section and Panel Data. MIT Press.
- [5] "Ministry of Micro, Small & Medium Enterprises, 2007: Micro, Small and Medium Enterprises in India: An Overview", Ministry of Micro Small and Medium Enterprise, Government of India
- [6] MSME Development Act 2006, Ministry of MSME, Government of India
- [7] "Final Results: Third All India Census of Small Scale Industries 2001-2002", August 2004 Edition, Ministry of Small Scale Industries, Government of India.

- [8] “Guidelines for Rehabilitation of Sick Small Scale Industrial Units”, Reserve Bank of India Document, January 2002.

Table 1: size and performance of MSME sector in India

Number of Micro and Small Enterprises	12.8 million
Employment	31 million
Employment in % of Labor force	6.1%
Production at current prices	140 billion \$
Production growth	12.7%
Exports	33 billion \$
Share in GDP	6%
Share in manufacturing output	39%
Share in exports	33%

Source: Ministry of Micro, Small & Medium Enterprises, 2007

Table 2: Composition of small scale industries in India

Nature of activity	Registered SSI	Unregistered SSI	Total SSI Sector
Manufacturing, Assembling and Processing	62.1%	36.1%	33.6%
Repairing and Maintenance	7.5 %	18.5%	16.6%
Services	30.3%	45.4%	49.8 %
	(3.2% in 1987-88)		

Source: "Final Results: Third All India Census of Small Scale Industries 2001-2002", August 2004 Edition, Ministry of Small Scale Industries, Government of India.

Table 3: profile of firms in the SSI sector in India

	Registered SSI	Unregistered SSI
Proprietary units	90.1 %	97.2 %
Per unit employment	4.6	2.1
Per unit fixed investment	Rs. 711,000	Rs. 123,000.
Employment generated per 0.1 million Rs. of fixed investment	0.65	1.71
Units managed by women	11.08 %	10.66 %
Units managed by entrepreneurs from socially backward classes	51.45 %	55.62 %

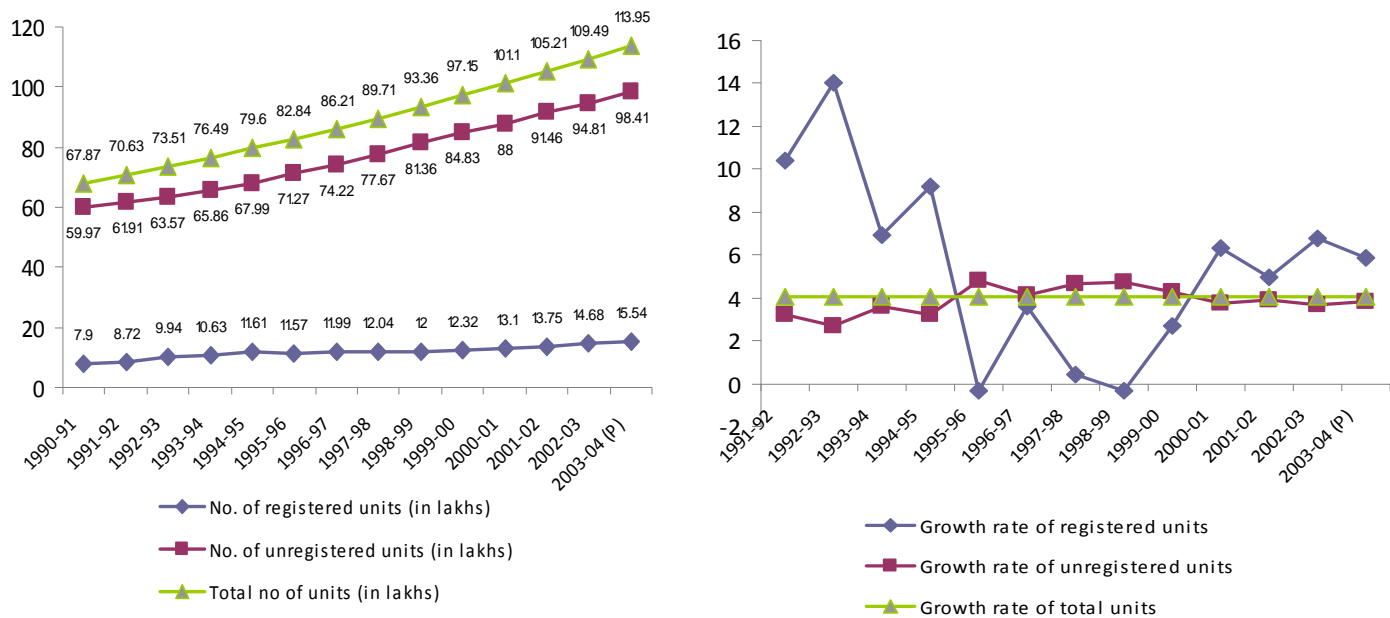
Source: "Final Results: Third All India Census of Small Scale Industries 2001-2002", August 2004 Edition, Ministry of Small Scale Industries, Government of India

Table 4: Health of units in the SSI sector in India

Reasons for sickness	Registered SSI	Unregistered SSI
Lack of Demand	71.6 %	84.1 %
Shortage of Working Capital	48.0 %	47.1 %
Marketing Problems	44.5 %	41.2 %
Power Shortage	21.4 %	14.8 %
Non-availability of Raw Material	15.1 %	15.2 %
Equipment Problems	10.6 %	12.9 %
Labor Problems	7.4 %	5.1 %
Management Problems	5.5 %	5.1 %

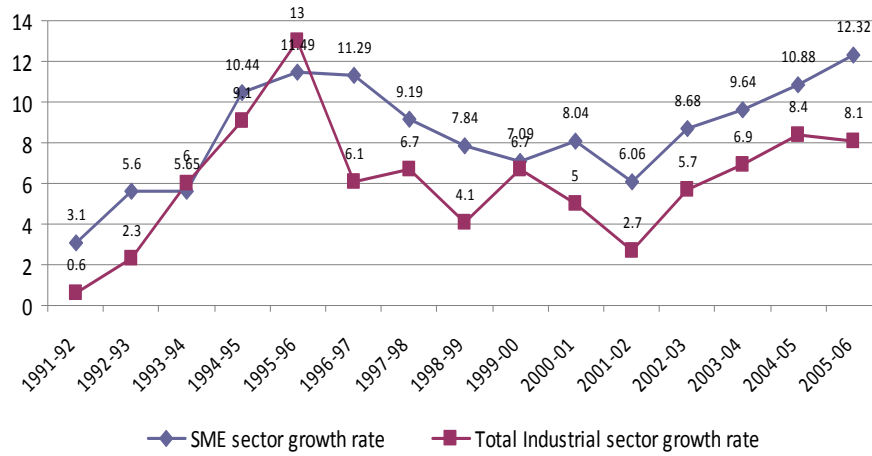
Source: "Final Results: Third All India Census of Small Scale Industries 2001-2002", 2004, Ministry of SSI, GoI

Figure 1: Growth of Indian micro small and medium enterprise sector (1990-2003)



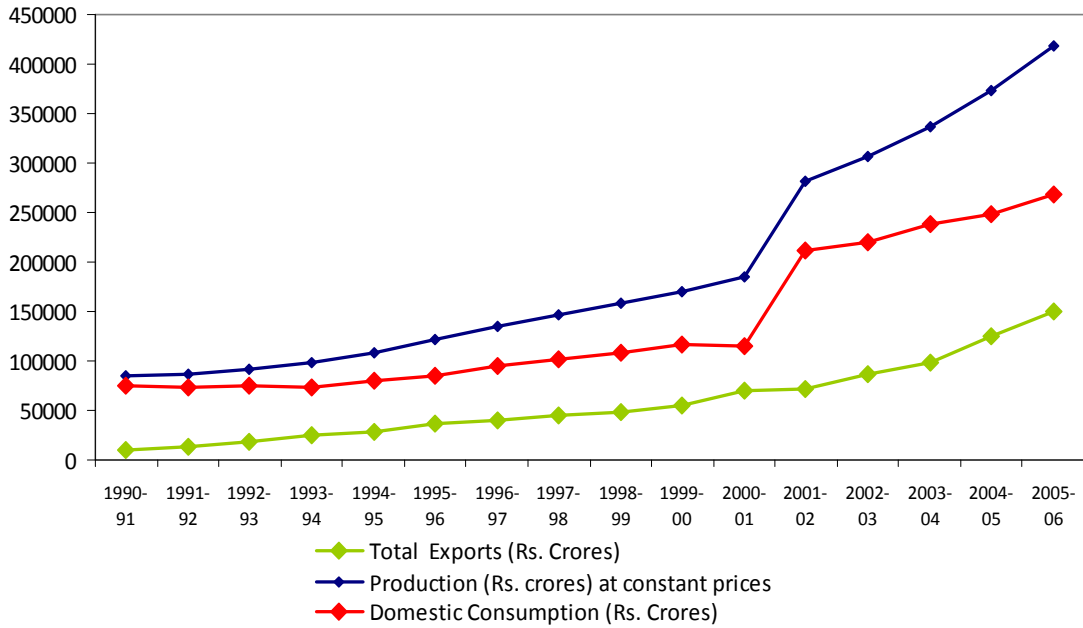
Data source: Annual Survey of Industries, Ministry of Statistics and Program Implementation, Government of India

Figure 2: Comparing growth of SME sector to total industrial sector



Data source: Annual Survey of Industries, Ministry of Statistics and Program Implementation, Government of India

Figure 3: Total Production in SSI sector



Data source: Annual Survey of Industries, Ministry of Statistics and Program Implementation, Government of India

Table 5: Effect of targeted state outlays for development of MSMEs (1991-2002)

	I	II
	Number of MSME units	Output per unit of MSMEs (Rs.)
<i>Targeted State Policies for MSMEs (M_{st})</i>		
Total financial subsidy for MSMEs (Rs.)	-0.024** (0.007)	-0.076** (0.026)
Investment in industrial parks (Rs.)	0.003 (0.009)	0.0013 (0.0016)
Number of clusters and parks	0.502 (0.316)	-0.192 (0.546)
Total expenditure on technology support (Rs.)	0.03 (0.022)	-0.06 (0.04)
<i>General State Development Policies (G_{st})</i>		
Total expenditure on infrastructure (Rs.)	0.0232** (0.001)	0.014** (0.001)
Number of bank branches	0.00223** (0.0007)	0.0051** (0.0012)
Total per capita taxes (direct + indirect) (Rs.)	-0.0025 (0.002)	0.0020 (0.0036)
<i>State Characteristics (X_{st})</i>		
Labor cost per day (Rs.)	0.006 (0.005)	0.0048 (0.009)
State per capita GDP (Rs.)	0.000586* (0.00025)	0.000167 (0.00014)
Literacy rate	-0.0826 (0.0679)	-0.0488 (0.117)
Constant	0.146 (4.002)	8.346 (6.910)
Observations	525	525
R^2	0.981	0.940

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; the standard errors are clustered by state; all variables in (Rs.) amount are in logarithm value.

Table 6: Effect of targeted state outlays for development of MSMEs (1991-2002)

	III	IV
	Employment per unit of MSME	Exports per unit of MSME (Rs.)
<i>Targeted State Policies for MSMEs (M_{st})</i>		
Total financial subsidy for MSMEs (Rs.)	-0.03* (0.016)	-0.01 (0.03)
Investment in industrial parks (Rs.)	-0.0002 (0.0013)	0.0232 (0.022)
Number of clusters and parks	-4.283 (7.159)	0.26* (0.12)
Total expenditure on technology support (Rs.)	0.012 (0.027)	0.0371* (0.017)
<i>General State Development Policies (G_{st})</i>		
Total expenditure on infrastructure (Rs.)	0.026* (0.011)	0.0826** (0.008)
Number of bank branches	0.00331** (0.001)	0.018** (0.0063)
Total per capita taxes (direct + indirect) (Rs.)	-0.0031 (0.0028)	0.0501 (0.047)
<i>State Characteristics (X_{st})</i>		
Labor cost per day (Rs.)	0.0117 (0.007)	-0.033 (0.120)
State per capita GDP (Rs.)	0.000241 (0.0002)	0.00114 (0.0033)
Literacy rate	-0.0906 (0.0938)	-0.418 (1.536)
Constant	1.872 (5.526)	7.827 (9.52)
Observations	525	525
R^2	0.973	0.704

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; the standard errors are clustered by state; all variables in (Rs.) amount are in logarithm value.