

Chapter 6

Future of Entrepreneurship in Rajasthan

6.1 Introduction

The projection of the future of entrepreneurship in the state provide valuable inputs for the formulation and implementation of industrial policy. Reasonable accuracy in projection is necessary if industrial policy is to have a predictable effect on the ultimate economic objectives i.e. employment, investment and growth. This being the reason, an attempt is made here to forecast the future of entrepreneurship in Rajasthan.

Rajasthan's economy is based on agriculture and traditional industries which in turn are dependent on natural resources like cotton, limestone, marble and gypsum. The leading industries of Rajasthan are cement, textiles, handloom, oilseeds processing, engineering and chemicals. The main items of export are gems and ornaments, woolen carpets, hand printed clothes, tie and dye clothes, handicrafts, marble and marble artifacts and engineering goods. The state has 3.2% of total registered factories in India, providing employment to only 3% of the total workforce.

6.2 Historical Growth of Industries in Rajasthan.

Large and Medium industries (LMI) have played a very small role in the industrialization of Rajasthan. Figure 6.1 depicts information on the status of LMI operating and closed units from 1990 to 2003. It is observed until 1997-1998 there was a steady growth in the number of operating units of LMI. Between 1998 and 1999 there was a sharp decline in the number of operating LMI units and after 1999 the number of LMI operating units has stagnated at around 370 units.

During the year 1999, there was a sharp increase in the number of LMI which got closed. Analysis of the data for the time period 1990 to 2003 reveals that the rate (78.27%) at which units are closed is twice the rate of the establishment new units (39.02).

The growth of employment and investment in LMI in Rajasthan is presented in Figure 6.2. At the end of the year 2003 LMI were providing employment to almost 1.25 Lakh people. Until 1998 there was a stable increase in the employment provided by LMI in Rajasthan but after 1998 there has been a continuous decrease in the employment opportunities provided by them.

In spite of the decline in the number of operating units over the last fourteen years (1990-2003), the investments by LMI in the fixed capital increased steadily. Since 1990 the investments appear to have grown annually at a compound rate of 15.73%.

On almost all other parameters with reference to LMI the future does not appear to be bright. Only Rajsamand and Sawai Madhopur are expected to witness any growth in the (net) number of operational LMI units. Likewise, employment provided in the LMI units is expected to increase only in the districts of Rajsamand, Tonk, Sawai Madhopur and Hanumangarh.

Small Scale Industry

The Small Scale Sector acts as the backbone of industrialization in many countries including India. In a populous country like India, facing large-scale unemployment, it is necessary for the government to come up with some means of employment generation in order to avert social strife and deterioration in the law and order situation. SSIs generally require less capital and are labour-intensive in nature. Furthermore, they are suitable for employment generation in rural areas and discourage migration of local population. SSIs being smaller in size can also be geographically dispersed leading to uniform growth and development.

In Rajasthan, SSIs played a significant role in the development of the state. Since 1975, there has been a steady growth in the number of registered SSI units. Figure 6.3 shows the growth of SSI in Rajasthan since 1975 and provides information on units registered, people employed and quantum of investments. Since 1990, units registered, employment provided and investments made have reported a compound annual growth of 3.54%, 3.81% and 11.67% respectively.

6.3 Methodology and Data Collection

To project the future of entrepreneurship in Rajasthan, initially an expert opinion survey was attempted. Thirty experts were identified from industry, government, academic and non-profit organizations. (The list of these experts is provided in Appendix 32). The responses were not very encouraging as only four experts responded. Also, the opinions of these experts varied widely, with one expert estimating the number of units to be established in the next ten years to be 1000, and another estimating the same to be 10000. The third expert confessed his inability to make any prediction but suggested that the Industries Department be contacted. Mr. K. C. Sharma from the industries department, when contacted, advised that a trend analysis, being simple, reasonably reliable and least controversial would provide a fair estimate of the future. The fourth expert, who belonged to the Bureau of Investment Promotion (Jaipur), recommended that a trend analysis be carried out based on the historical data and then projections made for the future (The responses have been reproduced in Appendix 33 to Appendix 36).

Based on the results of the survey reported in chapter four, an attempt has been made to estimate the number of SSI units that are likely to be set up over the next few years (2006 to 2010).

The population of Rajasthan (2001-02) was stated to be 56.473 million. (Source: Socioeconomic Statistics of Rajasthan, 2001-02). According to the census of India 2001, the number of households in Rajasthan was 9,642,294. Based on these two figures, the average household size in Rajasthan works out to 6.04 or, approximately 6.

The following assumption has been made based on the advice of the Additional Director, District Industries Center, Jaipur, Rajasthan: 'Village or rural units set up by rural households are mostly tiny or cottage industries. SSIs (either rural or urban) are set up by urban households (primarily because of capital requirements)'.

The Socioeconomic Statistics of Rajasthan, 2001-02, gives the urban population of Rajasthan as 13.205 million. Taking the size of the average or representative household to be six, the number of urban households works out to 2,200,833.

The data for the survey were collected randomly from the members of the public. It is therefore reasonable to assume that no two respondents belonged to the same household. Based on the results of the survey, 42 respondents mentioned an interest in starting a manufacturing unit. This works out to 6.04% of the 695 respondents who participated in the survey.

Extrapolating this to the population, based on the number of urban households (calculated above), the number of manufacturing units likely to be set up is 1,32,930.

As per the survey, respondents had given time frames ranging from 1 year to 5 years regarding when they would set up the units. Assuming the number is distributed uniformly over the period, only one fifth of these can be expected to set up units each year for the next five years. However, historically, as a continuous process spread over years, the spillover of previous years also has to be considered. Therefore, this number is likely to reduce, slightly, as the number (percentage) of people intending to start a business is likely to progressively increase over time – due to increases in population, both in number and percentage.

Based on the above, the estimate is that about 1,20,000 households intend to start a business during a year.

Of these, only those that get registered will be reflected in the data. It is therefore necessary to first estimate the percentage of registered units.

Estimation of the number of registered units

In the Third Census of SSIs, the units, which were permanently registered with the SDIs till 31st March 2001, were covered on a complete enumeration basis. The frame of registered SSI units contained SSIs, ancillary units and Small Scale Service Business Enterprises (SSSBEs), which were under the purview of Small Industry Development Organisation (SIDO). It did not include those coming under the purview of KVIC, Silk Board, Handicrafts Board, and Textile Commissioner, etc.

In the third Census, the units permanently registered up to 31.3.2001 were covered on a complete enumeration basis. A total of 22,62,401 units were surveyed. Out of these, 13,74,974 units were found to be functioning and the remaining 8,87,427 units were found closed. Thus, the proportion of working units works out to 60.77 %. (Source: <http://www.smenetwork.net/economy/census/ch2.htm> “RESULTS OF THIRD CENSUS, Reference Period: 2001-02”)

Based on the third census, the percentage distribution of units by nature of activity was obtained as shown in Table 6.1. From this it was determined that 71.13% of units were involved in manufacturing or assembly or processing operations.

Table 6.1 Percentage Distribution of No. of Units by Nature of Activity

	Mfg./Assembly/ Processing	Repairing &Maintenance	Services	Total
Rural	30.57	1.01	12.14	43.72
Urban	40.56	1.52	14.2	56.28
Total	71.13	2.53	26.34	100

In order to determine the total number of SSI units in Rajasthan, the latest data available was taken from the Economic Census All-India Report (1998), Government of India, Ministry of Statistics and Programme Implementation (Refer Table 6.2).

Table 6.2 Number of Enterprises Engaged in Manufacturing by Type of Enterprise

	Own Account Enterprises	Non-directory Establishments	Directory Establishments	Total
Rural	116454	19523	5154	141131
Urban	70785	24625	8996	104406
Total	187239	44148	14150	245537

In the census a complete enumeration of all agricultural (except crop production & plantation) and non-agricultural entrepreneurial activities was carried out through out the country. For the purpose of the census, an enterprise was defined as an undertaking engaged in production and/or distribution of goods and/or services not for the sole purpose of own consumption. An agricultural enterprise was defined as one engaged in livestock production and agricultural services including hunting, trapping and game propagation, forestry, logging and fishing. Enterprises engaged in activities pertaining to agricultural production and plantations were not covered under the economic census. Enterprises engaged in all other activities were termed as non-agricultural enterprises. Enterprises engaged in economic activities with the assistance of at least one hired worker on a fairly regular basis were defined as Establishments. The enterprises operated with the help of household labour only were termed as Own-Account Enterprises. (http://mospi.nic.in/mospi_ec.htm)

For reason of comparison, data of 2001 had to be estimated. Based on the data given above and the rates of growth, which were also available from the same report, (Refer Table 6.3), the respective figures for 2001 were estimated.

Table 6.3 Comparison of Growth Rate of Enterprises

	1980-1990	1990-98
Rural	1.28	3.55
Urban	3.01	3.24

From the trend in the rates of growth shown above, the mean values of the annual rates of growth for the period 1998-2001 were calculated to be 5.82% for rural units and 3.47% for urban units.

The data on the number of registered units (working and closed) in Rajasthan is given in Table 6.4

Table 6.4 Working and Closed Registered units in Rajasthan

Working units	46378
Closed units	37878
Total	84256

Source: Third Census of SSIs (Reference Period: 2001-02): 34.

Based on data available for 1998, the calculated rates of growth and the data on registered SSI, the following figures were calculated for 2001 (Refer table 6.5).

Table 6.5: Projected Number of SSI Units for 2001

	Registered	Unregistered	Total
Manufacturing	16072	266818	282890
Non-manufacturing	68184	46634	114818
Total	84256	313452	397708

From Table 6.5 it can be seen that the percentage of registered units to the total number of units ($= 84256/397708 * 100$) is 21.19%.

Therefore, of the 120,000 units the public intends to set up this year, the number of registered units is likely to be: $120000 \times 0.2119 = 25,428$

Reconciliation of Results:

As can clearly be observed, there is not only significant variation between the experts' estimates (100 to 1000 per annum) but also between the experts' estimates and the computations based on the primary data (25,428 per annum).

In order to resolve this situation, it was decided to first project the future trends, using data available for the previous years (as per the recommendation of the fourth expert from the Bureau of Investment Promotion, Jaipur). Secondary data collected from the Directorate of Industries, Government of Rajasthan for the period of 1990 to 2003, were used as the basis for future projections.

Time series data were collected for SSI with regard to the number of operating units, number of people employed and amount of investment in fixed capital (Rs. Lakhs). Table 6.6 gives details about the type of information collected and the time period used for projections. The historical data of all these categories are provided in Appendix 37 to Appendix 47.

The district-wise data were not available for the year 1998. By averaging the figures of the previous and following years these missing data were filled in and the forecasts were developed.

Prior to 1995 there were thirty districts in Rajasthan and as of today there are thirty-two districts. Hanumangarh was formed as a separate district in the year 1994 and Karuli was

formed in the year 2000. Hanumangarh earlier was a part of Sri Ganganagar district and Karuli was a part of Ajmer district.

Table 6.6: Projecting the Future State of Entrepreneurship in Rajasthan – Variables Used and Time Period of Data

	Across Rajasthan			District-wise		
	Operating Units	Employment	Investment	Operating Units	Employment	Investment
SSI	1975-2005			1995-2005		

Based on the time series data trend analysis was carried out for projecting the future state of entrepreneurship.

Assuming the equation for a trend line is

$$F = a + bt$$

where:

F- forecast,

t - time value,

a – intercept on y axis,

b - slope of the line

and using the least square method, values for ‘a’ and ‘b’ were determined.

The coefficient of determination, R^2 , which measures the percentage of variation in the dependent variable, has been calculated for all the forecasts made in this report.

Table 6.7 contains District-wise projections about the number of operating SSI units.

Table 6.7: District-wise Projection of Cumulative Registered & Operating SSI Units Upto 2010

S. No.	District	As on year ending 31 st March					Compounded Annual Growth Rate	R ²
		2006	2007	2008	2009	2010		
01	Ajmer	31083	32120	33157	34194	35231	3.18	0.99
02	Alwar	14397	14924	15452	15979	16506	3.48	0.99
03	Banswara	20136	20734	21332	21930	22528	2.85	0.99
04	Baran	14584	15046	15509	15971	16434	3.03	0.99
05	Barmer	18573	19305	20037	20769	21501	3.73	0.99
06	Bharatpur	12245	12690	13135	13580	14025	3.45	0.99
07	Bhilwara	10201	10568	10935	11301	11668	3.42	0.99
08	Bikaner	16176	16657	17137	17618	18098	2.85	0.99
09	Bundi	7458	7656	7854	8052	8250	2.56	0.99
10	Chittorgarh	8264	8503	8742	8982	9221	2.78	0.99
11	Churu	10031	10468	10906	11343	11781	4.10	0.99
12	Dausa	6791	7032	7274	7516	7757	3.38	0.99
13	Dholpur	5556	5723	5890	6057	6224	2.88	0.99
14	Dungarpur	16413	16991	17568	18145	18723	3.35	0.99
15	Jaipur	9132	9456	9780	10105	10429	3.38	0.99
16	Jaisalmer	6866	7069	7273	7476	7679	2.84	0.99
17	Jalore	6893	7099	7306	7513	7719	2.87	0.99
18	Jhalawar	8144	8369	8593	8818	9042	2.65	0.99
19	Jhunjhunu	4474	4588	4701	4814	4927	2.44	0.99
20	Jodhpur	4290	4446	4603	4760	4917	3.47	0.99
21	Kota	5906	6063	6220	6377	6534	2.56	0.99
22	Nagaur	2905	3007	3109	3211	3313	3.34	0.99
23	Pali	2773	2919	3066	3212	3358	4.90	0.99
24	Rajsamand	4138	4281	4424	4567	4710	3.29	0.99
25	Sawai Madhopur	6445	6587	6730	6872	7015	2.14	0.99
26	Sikar	4578	4747	4915	5084	5253	3.50	0.99
27	Sirohi	2093	2188	2283	2378	2473	4.26	0.99
28	Sri Ganganagar	3723	4031	4338	4645	4953	7.40	0.99
29	Tonk	1549	1680	1810	1940	2071	7.53	0.99
30	Udaipur	3296	3566	3837	4107	4378	7.35	0.99
Total		269113	278513	287916	297316	306718	NA	NA

Over the period under consideration i.e. 2006 to 2010, the number of SSIs is forecast to increase from 269113 to 306718, an increase of 37,605 or about 9,400 per year.

The difference between the number forecast based on the primary survey i.e. 25,428 and the number of 9,400 obtained from the trend analysis can be reconciled by taking into consideration the following arguments which seem both logical and acceptable.

1. The degree of transformation of intent into action: When the subjects were asked about their intention to start a business, their immediate reaction to the question would not have been well thought out, since they were simply reacting to the question. It is likely that, the actual number who start a new business would be often less than that indicated by the survey.
2. Data available were inadequate to indicate the closure of SSI units. Therefore, the secondary data on registered and operating units would be taking into account the net addition of units in operation (since the units closed would be deducted from the total number of units). According to the third census the number of units closed amounts to almost 40% of the total number, which is quite high and significant.

It is clear that the primary survey may tend to overestimate the net increase in operational registered SSI units. This conclusion is corroborated by the trend analysis which finds an addition of 9,400 units per annum for period of the forecast. Therefore, these figures may be taken as reasonably accurate and the predictions are made based on that methodology.

6.4 Projected Growth

The projected growth of industries in Rajasthan was studied. Forecast was prepared by extrapolation of historical trends. The objective was to assess the future of entrepreneurship in Rajasthan so that remedial measures, could be suggested.

6.4.1 SSIs Across Rajasthan

The projected figures for Rajasthan regarding SSI operating units, employment generation and investment in fixed capital are presented in Table 6.8. The figures show that highest rates of growth are expected in investments, followed by operating units and finally employment. It is expected that by 2010, investment will grow by 3.65%, operating units by 2.91% and employment generation will increase by 2.74% and. From the historical data it is clear that SSIs in Rajasthan have witnessed a steady and moderate growth.

Table 6.8: Projection of Operating SSI Units, Employment and Investment in Rajasthan Upto 2010

As on year ending 31st March	Operating Units (Cumulative Nos.)	Employment (Cumulative Nos.)	Investment in Fixed Capital (Rs. Lakhs, Cumulative)
2006	267436	1003390	343474.00
2007	275571	1032062	356720.00
2008	283706	1060734	369965.00
2009	291841	1089406	383210.00
2010	299976	1118078	396455.00
Compounded Annual Growth Rate	2.91	2.74	3.65
R²	0.99	1.00	0.92

6.4.2 District-wise analysis

A district-wise analysis has been carried out elaborating the responses for a clarity and inter-district comparison of the diffusion.

Operating Units

The number of operational SSI units across all the districts show an increase during the projected period. The rate of growth is expected to range from 2.14% to 7.53%. Twenty-seven districts seem to show rates of growth less than 5%. However, Udaipur, Sri Ganganagar and Tonk exhibit rates of growth exceeding 7%.

Employment Generation

District-wise projections for employment generation by SSI units are presented in Table 6.9. A positive rate of growth is projected in SSI employment across all the districts. The rates of growth range from 2.37% to 7.46%.

Twenty-four districts appear to exhibit rates of growth not exceeding 4%. Churu has a rate of growth of 4%, Pali 4.5%, Sirohi 5%, Udaipur 6.7% and Sri Ganganagr and Tonk greater than 7%.

Table 6.9: District-wise Projection of Cumulative Employment in Registered and Operating SSI Units Upto 2010

S. No.	District	As on year ending 31 st March					Compounded Annual Growth Rate	R ²
		2006	2007	2008	2009	2010		
01	Ajmer	152896	157799	162701	167604	172506	3.06	1
02	Alwar	63632	65607	67581	69555	71529	2.97	1
03	Banswara	71394	73770	76146	78521	80897	3.17	1
04	Baran	57774	59747	61720	63693	65666	3.25	1
05	Barmer	74875	77677	80478	83280	86081	3.55	1
06	Bharatpur	42389	43911	45433	46954	48476	3.41	1
07	Bhilwara	37361	38304	39247	40190	41132	2.43	1
08	Bikaner	61928	63940	65951	67962	69973	3.10	1

Table 6.9: District-wise Projection of Cumulative Employment in Registered and Operating SSI Units Upto 2010 (contd.)

S. No.	District	As on year ending 31 st March					Compounded Annual Growth Rate	R ²
		2006	2007	2008	2009	2010		
09	Bundi	20308	20849	21390	21930	22471	2.56	1
10	Chittorgarh	30483	31325	32167	33008	33850	2.65	1
11	Churu	45161	47081	49002	50922	52842	4.00	1
12	Dausa	22700	23596	24492	25388	26284	3.73	1
13	Dholpur	16364	16852	17339	17827	18314	2.85	1
14	Dungarpur	56638	58594	60550	62507	64463	3.29	1
15	Jaipur	45873	47107	48340	49573	50806	2.59	0.99
16	Jaisalmer	20590	21206	21821	22437	23052	2.86	1
17	Jalore	25938	26623	27307	27992	28676	2.54	1
18	Jhalawar	32478	33275	34073	34870	35668	2.37	1
19	Jhunjhunu	19912	20440	20967	21495	22023	2.55	1
20	Jodhpur	13444	13820	14196	14572	14949	2.69	1
21	Kota	22142	22721	23300	23879	24458	2.52	1
22	Nagaur	9067	9413	9759	10106	10452	3.62	1
23	Pali	8399	8804	9209	9613	10018	4.51	1
24	Rajsamand	12925	13397	13869	14342	14814	3.47	1
25	Sawai Madhopur	17959	18433	18907	19382	19856	2.54	1
26	Sikar	17325	17922	18519	19116	19713	3.28	1
27	Sirohi	7706	8123	8540	8956	9373	5.02	1
28	Sri Ganganagar	10711	11577	12443	13309	14175	7.26	1
29	Tonk	4418	4786	5154	5523	5891	7.46	1
30	Udaipur	11280	12116	12953	13789	14625	6.71	1
Total		1034070	1068815	1103554	1138295	1173033	NA	NA

Investment

Table 6.10 contains the District-wise projections for investment in fixed capital of SSI units. The projected figure shows that there is likely to be a positive rate of growth in investment in SSI units across all the districts. The rates of growth of investment range from 3.38% to 7.96%.

Table 6.10: District-wise Projection of Cumulative Investment (Rs. Lakhs) in Fixed Capital of Registered and Operating SSI Units Upto 2010

S. No.	District	As on year ending 31 st March					Compounded Annual Growth Rate	R ²
		2006	2007	2008	2009	2010		
01	Ajmer	30710.4	32635.6	34560.9	36486.1	38411.3	5.75	1
02	Alwar	72003.8	76581.1	81158.3	85735.6	90312.8	5.83	0.99
03	Banswara	5005.79	5229.96	5454.13	5678.29	5902.46	4.21	0.99
04	Baran	901.88	972.99	1044.1	1115.2	1186.31	7.09	0.99
05	Barmer	6126.48	6556.55	6986.62	7416.69	7846.76	6.38	1
06	Bharatpur	9465.7	10076.3	10686.8	11297.4	11908	5.91	1
07	Bhilwara	21778.2	22881.8	23985.4	25089	26192.6	4.72	0.99
08	Bikaner	17881.9	19118.7	20355.5	21592.3	22829.2	6.30	0.99
09	Bundi	1741.13	1803.06	1864.99	1926.93	1988.86	3.38	0.98
10	Chittorgarh	9801.95	10371.9	10941.8	11511.7	12081.6	5.37	0.99
11	Churu	6759.19	7039.84	7320.5	7601.15	7881.81	3.92	0.99
12	Dausa	2616.18	2811.77	3007.35	3202.94	3398.53	6.76	0.99
13	Dholpur	5975.92	6511.19	7046.45	7581.72	8116.98	7.96	1
14	Dungarpur	1967.08	2087.91	2208.75	2329.58	2450.42	5.65	0.99
15	Jaipur	84020.2	89237.7	94455.3	99672.8	104890	5.70	0.99
16	Jaisalmer	1526.6	1631.13	1735.67	1840.2	1944.73	6.24	0.99
17	Jalore	5573.8	5888.09	6202.38	6516.67	6830.96	5.22	1
18	Jhalawar	2642.08	2817.75	2993.42	3169.09	3344.76	6.07	0.99
19	Jhunjhunu	3778.98	3933.51	4088.03	4242.56	4397.08	3.86	1
20	Jodhpur	28735.3	30380.8	32026.3	33671.8	35317.3	5.29	0.97
21	Kota	12704.3	13397	14089.6	14782.3	15474.9	5.06	0.99
22	Nagaur	14171.7	14711.3	15250.8	15790.3	16329.8	3.61	0.98
23	Pali	10468	10980.9	11493.9	12006.9	12519.8	4.58	0.99
24	Rajsamand	10445.2	11188.8	11932.4	12676	13419.6	6.46	0.96
25	Sawai Madhopur	2576.47	2723.24	2870	3016.77	3163.54	5.27	1
26	Sikar	6831.49	7126.72	7421.95	7717.18	8012.41	4.07	0.97
27	Sirohi	13982.4	14748.8	15515.2	16281.6	17048	5.08	0.99
28	Sri Ganganagar	14301.6	14980.3	15659.1	16337.8	17016.5	4.44	0.98
29	Tonk	4250.57	4446.94	4643.31	4839.68	5036.05	4.33	0.99
30	Udaipur	28868.5	30390.5	31912.5	33434.5	34956.5	4.90	1
Total		437613	463262	488911	514561	540210	NA	NA

Dholpur may exhibit highest rate of growth of all most 8% followed by Baran at slightly over 7%. Dausa, Rajsamand, Barmer, Bikaner, Jaisalmer and Jhallwar are the other districts that have rates of growth above 6%.

The district wise analysis of SSIs shows all districts exhibiting growth in terms of all the three parameters.

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