

PROBLEMS AND PROSPECTS OF SMALL SCALE STAINLESS STEEL MANUFACTURERS IN TAMILNADU

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ABSTRACT

Small-scale industries play a vital role in the economy of any nation. There are many products and services under the banner of small-scale industries. Stainless steel utensils play an important role in home making particularly with reference to dining sets and kitchenware. The entrepreneurs of small-scale stainless steel utensils industries face numerous managerial problems in all functional areas. The interaction had with such entrepreneurs and their associates showed a clear indication of periodical research being carried out in different functional areas. Thus, this study “Problems and Prospects of Small-Scale Industries - An investigative study on stainless steel manufacturers in Tamilnadu” was designed to have an in-depth detail in this area. A sample of 365 entrepreneurs has been taken from the rural and urban areas of Tamilnadu. The secondary data have been compiled from the different sources and appropriate statistical tools such as ANOVA, t- test, correlation, chi-square, have been employed for analysis. The obtained results have been explained and discussed in this paper. Many of the planning policies regarding small scale units are also revealed and also suggested the strategy for the prospering of such units with effective suggestions.

Keywords: Attitude Orientation, Emotional Competency, Stainless Steel Manufacturers

INTRODUCTION

Small-scale industries (SSIs) play a very vital role in the economy of each and every nation. Nations firmly believe that rapid industrialization is possible only through a successful policy relating to small-scale industries. A leading, industrially advanced developing country, India has large, medium and small industrial units of production in almost all branches of the industry. Since the time of the independence in 1947, a significant feature of the Indian economy has been the rapid growth of the small industry sector. The small industry sector is considered to have a major role in the Indian economy due to its 40 percent share in the national industrial output along with an 80 percent share in industrial employment and nearly 35 percent share in exports. The reasons are that they provide large-scale employment. They have comparatively higher employment potential per unit of capital employed and they need only shorter gestation periods in comparison with large industries. They also facilitate effective mobilization of resources and capital and skill, which might otherwise remain unutilized and exploited.

Entrepreneurship and Economic Development

Economic growth and development of any country is determined and is dependent on entrepreneurial supply and performance. Entrepreneurs initiate, increase and sustain the process of economic development. The need for a broad based entrepreneurial class in India arises from the need to speed up the process of activating the factors of production leading to a higher rate of economic growth, dispersal of economic activities, development of backward and tribal areas, creation of employment opportunities and improvement in the standard of living of the weaker section of society in the process of growth.

History of Stainless Steel

Harry Brearley of England invented stainless steel. It is believed that his interest in steel was initiated as a result of his father's profession, which was melting steel. Brearley put in efforts night and day to become an expert in the analysis of steel and its production. In 1908, he set up the Brown Firth Laboratories. Four years later in 1912 he was asked to help solve the problems encountered by a small arms manufacturer. It was then that his search for a better type of steel began. In the initial stages Brearley began his experimentation with steels containing chromium. As per the recorded history of stainless steel the first authentic stainless steel was melted on 13th August 1913. This is said to have contained 0.24% carbon and 12.8% chromium. After this initial invention, years later, more precisely, by the late 1920's, two additional kinds of stainless steel were found. These were the martensitic stainless with 13% to 18% chromium content, austenitic stainless steel that contained 18% chromium and 8% nickel. Both these variations turned out to be very versatile and useful. Over the years, a group of steels containing a minimum of 10.5% chromium came to be regarded as stainless steel.

Now 95% of our gas stove market uses only stainless steel, which until the late 80's was using painted carbon steel bodies and later nickel-chromium plated ones. India has emerged as the largest producer of 200 series low nickel stainless steel in the world. Railways will completely switch over to manufacture of passenger coaches requiring 15 MT stainless steel per coach in next five years. In addition, the Delhi Metro Rail Corporation has already tendered for 200 all stainless steel coaches. The government of India is using Ferric cold rolled stainless steel strips for making coins. With major international fast food chains investing in India like Kentucky Fried Chicken, Pizza Hut, McDonald's, Burger King etc., the consumption of stainless steel is bound to increase as these fast food units use good quantity of stainless steel in kitchen, service area and furniture. A large potential exists for LPG cylinders in India with 90 million carbon steel LPG cylinders in use.

The question is, then how will the industry meet the expanding demand, for flat as well as for long products, in the coming years (about five years from now, say) if supply is to be restricted by investor apathy. The first option will be for the present steel mills to expand capacity from their current position. Although many such investments may also involve substantial money and the investors may not like to fund a losing concern, the Brownfield expansion, since will be much cheaper, can be expected to do better in the minds of the potential investors. In the event of the owners of many steel mills currently in deep financial difficulties not being able to support the cost of brown field expansion, the same facilities may be acquired or bought up by cash rich companies through mergers and acquisitions to facilitate further expansion in capacity. What is evidently important here is to know that immediate attention needs to be paid on the possibilities of investment in the plants not

constrained by infrastructure and where better economies of scale can be achieved by expansion of capacity.

REVIEW OF LITERATURE

The literature cites the various studies conducted in this area. The some of the studies conducted in this area have been discussed in the following paragraphs:

McCrorry (2005) studied 14 and 3 small-scale firms in Chopur and Moradabad towns respectively, in Uttar Pradesh. Through he considered family background in crafts as a needed source of good industrial entrepreneurs, he observed that in the initial stages such a background did not enable craftsmen entrepreneurs to protect their working capital and overcome a crisis in the industry. They lost their working capital in a variety of ways—through illness, a slump in the market, failure of a machine to sell, competition, deception of a partner, theft, etc.

Ramakrishnan (2008) studied 94 small-scale new (emerged after 2005) units in 11 modern industries in Delhi city. He divided the units into three categories as those, which succeeded in the industry, those that dropped out after production began and those, which failed to commence production itself. He considered social status and occupational background of the entrepreneurs' families as some of the determinants of this mobility.

Venkatapathy (1980) studied inter-generation career mobility of entrepreneurs and found that presence or lack of certain psychological factors determined the success or failure of these entrepreneurs.

Venkatapathy and Manickam (1996) made an attempt to study the entrepreneurial attitude orientation among women beneficiaries of the Prime Minister Rozgar Yojana (PMRY) and girl students passing out from management institutions covering 52 and 38 respondents, respectively. They concluded that the entrepreneurial sample were high on achievement, innovation, personal control and opportunism. Achievement scale scores significantly differentiated the entrepreneurial sample scores were constantly from the student's sample.

The measure of emotional intelligence is called emotional competency or emotional stability. Meyers, (1996) defined emotional intelligence in terms of being able to monitor and regulate one's own and other's feelings, and to use feelings to guide thought and action. Emotional intelligence is further defined as the ability to motivate oneself and permit in the face of frustration; to control impulse and delay gratification, to regulate one's moods and keep distress from swamping the ability to think; to empathies and to hope (Daniel Goleman, 1995).

The above studies have touched the various aspects relating to entrepreneurs in small scale sector but none of the study seems to have touched the area relating to technological barriers. The present study proposes to fill the gap in existing literature.

SCOPE OF THE STUDY

Experimental development is an important milestone in the process of industrialization. There is a lot of scope for studying entrepreneurs of small-scale industries in general and stainless steel utensil industries in particular. Even though there is a wide scope for studying the various dimensions of small-scale stainless utensils industries the scope of this study is focused towards managerial issues and related demographical and psychological influences

of entrepreneurs of small-scale stainless steel utensils industries. With this background, the researcher has framed the following objectives for this study.

OBJECTIVES

1. To study the nature, type and level of relationship between demographical variables and problems of small-scale industries.
2. To find out the difference if any, between the opinion of entrepreneurs on their Entrepreneurial Attitude Orientation and Entrepreneurial Emotional Competence.
3. To study the influence of entrepreneurial emotional competence on the problems of small-scale stainless steel industry.
4. To examine the prospects of small scale stainless manufacturers in Tamilnadu.
5. To suggest the strategies for further development of small scale stainless manufacturers in Tamilnadu.

HYPOTHESIS

With the help of reviews, the following hypotheses were formulated and tested in this study:

1. There is a significant difference in the level of problems on various functions of management of small-scale stainless steel industry based on the age of entrepreneurs of the industry.
2. There is a significant difference in the level of problems on various functions of management of small-scale stainless steel industry based on the educational qualifications of the entrepreneurs of the industry.
3. There is a significant difference in the level of problems on various functions of management of small-scale stainless steel industry based on the location of the industry.
4. There is a significant difference in the level of problems on various functions of management of small-scale stainless steel industry based on the emotional competency of entrepreneurs.
5. There is a significant difference in the level of problems on various functions of management of small-scale stainless steel industry based on the attitude orientation of entrepreneurs.
6. There is a relationship between the age and the business problems of small-scale stainless steel manufacturers.
7. There is significant relationship in the level of general management problems of small-scale stainless steel manufacturers differs based on the location of their industry.

RESEARCH METHODOLOGY

The study has been pursued to analyze the problem and prospects of small scale stainless steel manufacturers in Tamilnadu. To analyze this problem, a sample of 365 entrepreneurs has been taken from different cities of Tamilnadu (Chennai, Salem, Karaikudi, and Kumbakonam and the adjoining rural areas). To analyze the problems a well-designed

standardized questionnaire was prepared and administered to the entrepreneurs of the small scale stainless steel sector. They include Small-scale stainless steel industry problem identification questionnaire, Emotional competency scale, and Entrepreneurial Attitude Orientation Scale. The data collected through primary source were tabulated scientifically. The tabulated data were analyzed using appropriate statistical tools such as ANOVA, t- test, correlation and chi-square. The obtained results have been explained and discussed in the following section.

DATA ANALYSIS AND INTERPRETATION

Hy: The level of business problems of small-scale stainless steel manufacturers differs based on their age.

Table1. Showing the mean values, SD, ‘F’ value and its LS of ANOVA for business problem scores of small-scale stainless steel manufacturers based on their age.

Sl.No.	Age in years	Group	Mean	N	S.D.	‘F’ Value	LS
1.	Up to 20	A	243.01	83	16.48	18.18	0.01
2.	21-30	B	229.40	98	16.20		
3.	31-40	C	220.20	85	15.82		
4.	40 and above	D	165.30	99	15.70		
Total			214.48	365	16.05		

Table 2. Showing the mean values, SD, ‘t’ values and their LS of t-test for group comparisons on business problem scores of small-scale stainless steel manufacturers based on their age.

Sl.No.	Age in years	Group	Mean	N	S.D.	Groups	‘t’ value	LS
1.	20	A	243.01	83	16.48	A&B	5.6	0.01
2.	21-30	B	229.40	98	16.20	A&C	9.5	0.01
3.	31-40	C	220.20	85	15.82	A&D	37.0	0.01
4.	40 and above	D	165.30	99	15.70	B&C	4.0	0.01
Total			214.48	365	16.05	B&D	17.0	0.01
						C&D	26.0	0.01

The table shows various groups of manufacturers based on the age in years of their industry, their mean values on business problems scores, ‘F’ value and the LS. The obtained ‘F’ value 18.18 is statistically significant at 0.01 level. Therefore, the stated hypothesis that “the level of business problems of small-scale stainless steel manufacturers differs based on the Age in years of their industry” is accepted. Paired comparisons between various groups have also been done using t-test. The obtained t-test for the groups A & B, A & C, A & D, B & C, B & D and C & D are 5.6, 9.50, 37.00, 4.00, 17.00, 26.00 respectively, all are significant at 0.01 level. The result clearly revealed that age plays a major role and the middle-aged entrepreneurs were far efficient than the young entrepreneurs in solving the business problems.

Hy: The level of business problems of small-scale stainless steel manufacturers differs based on their educational qualification.

Table 3. Showing the mean values, SD, 'F' value and its LS of ANOVA for business problem scores of small-scale stainless steel manufacturers based on their educational qualification.

Sl. No.	Qualification	Group	Mean	N	S.D.	'F' Value	LS
1.	Illiterate	A	280.4	16	18.91	23.90	0.01
2.	Up to 5 th	B	250.4	106	16.61		
3.	6 – 12 th	C	218.5	59	14.48		
4.	Graduate	D	181.3	104	13.95		
5.	Post-Graduate	E	141.5	80	12.62		
Total			214.45	365	15.303		

Table 4. Showing the mean values, SD, 't' values and their LS of t-test for group comparisons on business problem scores of small-scale stainless steel manufacturers based on their educational qualification.

Sl. No.	Qualification	Group	Mean	N	S.D.	Groups	't' value	LS
1.	Illiterate	A	280.4	16	18.91	A&B	6.12	0.01
2.	Up to 5 th	B	250.4	106	16.61	A&C	12.40	0.01
3.	6 – 12 th	C	218.5	59	14.48	A&D	20.00	0.01
4.	Graduate	D	181.3	104	13.95	A&E	28.95	0.01
5.	Post-Graduate	E	141.5	80	12.62	B&C	13.30	0.05
Total			214.45	365	15.303	B&D	31.30	0.01
						B&E	54.50	0.01
						C&D	16.00	0.01
						C&E	34.50	0.01
						D&E	22.20	0.01

The table shows various groups of manufacturers based on the qualification, their mean values on business problems scores, 'F' value and the LS. The obtained 'F' value 23.90 was statistically significant at 0.01 level. Therefore, that the stated hypothesis that “the level of Business problems of small-scale stainless steel manufacturers differs based on the qualification” is accepted. Paired comparisons between various groups have also been done using t-test. The obtained t-test for the groups A & B, A & C, A & D, A & E, B & C, B & D, B & E, C & D, C & E, D & E are 6.12, 12.40, 20.00, 28.95, 13.30, 31.30, 54.50, 16.00, 34.50, 22.20 respectively, all are significant at 0.01 level except B & C which is significant at 0.05 level. From the results it is evident that the well qualified entrepreneurs faced lesser problems compared to the less qualified entrepreneurs.

Hy: The level of emotional competency of small-scale stainless steel manufacturers differs based on their location of their industry.

Table 5. Showing the mean value, standard deviation, 't' value and its LS for emotional competency scores of small-scale stainless steel manufacturers based on their location.

S.No.	Location	N	Mean	SD	Std. error mean	't' value	LS
1.	Urban	264	53.24	19.450	1.197	2.68	0.01
2.	Rural	101	58.88	18.525	1.843		

Table reveals that the rural based small-scale entrepreneurs' mean score (58.88) is high compared to rural based small-scale entrepreneurs mean score with regard to emotional competency. This indicates that rural based entrepreneurs are emotionally balanced and competent compared to their urban counterparts. It is further evident from the 't' value (2.68) that the difference between the level of emotional competency scores of small-scale stainless steel manufacturers of rural and urban-based areas is significant at 0.01 level. Hence the above stated hypothesis that is "the level of emotional competency of small-scale stainless steel manufacturers differs based on the location of their industry" is accepted

Hy: There is an association between the entrepreneurial attitude components and level of business problems of small-scale stainless steel manufacturers.

Table 6. Showing the 4x3 model of chi-square test between the entrepreneurial attitude of small scale stainless steel manufacturers and their level of business problems

S. No.	Entrepreneurial Attitude	Low	Moderate	High	Total	df	χ^2	LS
1	Achievement Orientation	41	22	20	83	6	7.44	0.01
2	Innovation orientation	44	27	19	90			
3	Perceived Personal control	48	24	28	100			
4	Perceived self-esteem	39	19	34	92			
Total		172	92	101	365			

The table shows the components of entrepreneurial attitude such as achievement orientation, innovation orientation, perceived personal control and perceived self-esteem. One of the objectives of the research work is to understand the association between entrepreneurial attitude components and level of business problems of small-scale stainless steel manufacturers. In order to achieve the objective this chi-square test was conducted. The obtained chi-square value (7.44) is statistically significant at 0.01 level. Therefore, the stated hypothesis "there is an association between the entrepreneurial attitude components and level of business problems of small-scale stainless steel manufacturers" is accepted

Hy: There is an association between the emotional competency components and level of business problems of small-scale stainless steel manufacturers.

Table 7. Showing the 5x3 model of chi-square test between the emotional competency of Small scale stainless steel manufacturers and their level of business problems

S. No.	Emotional Competency	Low	Moderate	High	Total	df	χ^2	LS
1	Adequate depth of feeling	50	6	23	79	8	12.10	0.01
2	Adequate expression and control of emotions	41	12	17	70			
3	Ability to function with emotions	44	20	19	83			
4	Ability to cope with problems emotions	38	16	26	80			
5	Encouragement of positive emotions	32	8	13	53			
Total		205	62	98	365			

Emotional competency includes five components viz., adequate depth of feeling, adequate expression and control of emotions, ability to function with emotion, ability to cope with problem emotions and encouragement of positive emotions. The obtained chi-square value (12.10) is statistically significant at 0.01 level. Therefore, the stated hypothesis that “there is an association between the emotional competency components and level of business problems of small-scale stainless steel manufacturers” is accepted.

Hy: There is a relationship between the age and the business problems of small-scale stainless steel manufacturers.

Table 8. Showing the variables, correlation coefficient, t values and its LS between the age and business problems of stainless steel manufacturers

S.No.	Variable	r value	't' value	LS
1.	Business problems	-0.662	12.56	0.01
2.	Age			

Age of business men is one of the influencing variables in the field of small-scale industries research. A correlation coefficient test was worked out for the scores of age and business problems of small-scale stainless steel manufacturers. The obtained r values is given in the table as -0.622 This r values is tested using the appropriate t test. The value of 't' 12.56 is statistically significant at 0.01 level. Therefore the stated hypothesis “There is a relationship between the age and business problems of stainless steel manufacturers and their business problems” is accepted. The table reveals that there is a negative relationship between business problems and age of small-scale stainless steel manufacturers

Hy: The level of marketing problems of small-scale stainless steel manufacturers differs based on the location of their industry.

Table 9. Showing the mean value, standard deviation, 't' value and its LS for marketing problem scores of stainless steel manufacturers based on the location of their industry

S.No.	Location	N	Mean	SD	SE	't' value	L.S
1.	Urban	264	55.92	11.290	0.939	4.27	0.01
2.	Rural	101	66.54	10.814	0.832		

It is observed from the table that, the rural based stainless steel manufacturers face enormous business problems (66.54) in marketing compared to the urban based (55.92) stainless steel manufacturers. It is evident from the 't' value (4.27) that the difference between the two groups viz., rural and urban are significant at 0.01 level. Hence, the stated hypothesis that the level of marketing problems of SSI stainless steel manufacturers differs based on the location of their industry is accepted. It is thus clear from the results that, there is significant difference in marketing problems faced by rural and urban based stainless steel manufacturers.

Hy: The level of Human resource problems of small-scale stainless steel manufacturers differs based on the location of their industry.

Table 10. Showing the mean value, standard deviation, 't' value and its LS for human resource problems scores of small-scale stainless steel manufacturers based on the location of their industry.

S.No.	Location	N	Mean	SD	SE	't' value	LS
1.	Urban	264	30.00	4.374	0.269	14.267	0.01
2.	Rural	101	36.42	3.620	0.360		

The above table clearly shows the mean, SD, and 't' value corresponding to the difference between the rural and urban based small-scale stainless steel manufacturers. Based on the results, the researcher observed that the rural based employees problems is high human resource problems (36.42) compared to the urban based (30.00) stainless steel manufacturers. It is evident from the 't' value (14.267) level that the difference between the two groups viz., rural and urban are statistically significant at 0.01 level. Therefore, the stated hypothesis that "the level of human resource problems of small-scale stainless steel manufacturers differs based on the location of their industry" is accepted.

Hy: The level of production management problems of small-scale stainless steel manufacturers differs based on the location of their industry.

Table 11. Showing the mean value, standard deviation, 't' value and its LS for production management problems scores of small-scale stainless steel manufacturers based on the location of their industry.

S.No.	Location	N	Mean	SD	Std. error mean	't' value	LS
1.	Urban	264	45.48	10.131	624	10.41	0.01
2.	Rural	101	56.73	8.979	0.893		

The results revealed that the rural based stainless steel manufacturers (56.73) face more production problems compared to urban (45.48) based stainless steel manufacturers. Based on the mean and standard deviation the 't' value (10.41) clearly shows the difference between the two groups viz., urban and rural which are statistically significant at 0.01 level. Hence

the researcher concludes that the stated hypothesis is accepted. It is thus clear from the results that, there is significant difference in the production problems faced by the rural and urban-based stainless steel manufacturers.

Hy: The level of financial management problems of small-scale stainless steel manufacturers differs based on the location of their industry.

Table 12. Showing the mean value, standard deviation, 't' value and its LS for financial management problems scores of small scale stainless steel manufacturers based on the location of their industry.

S.No.	Location	N	Mean	SD	Std. error mean	't' value	LS
1.	Urban	264	40.80	4.365	0.269	11.69	0.01
2.	Rural	101	45.42	4.143	0.412		

It is clearly evident from the results that the rural entrepreneurs face more financial problems (45.42) compared to their urban-based counterparts (40.80). The t-ratio reveals that the level of financial management problems of small-scale stainless steel manufacturers differs based on the location of their industry is significant at 0.01 level. Hence the researcher confirms that the formulated hypothesis that "the level of financial management problems of small-scale stainless steel manufacturers differs based on the location of their industry" is accepted.

Hy: The level of general management problems of small-scale stainless steel manufacturers differs based on the location of their industry.

Table 13. Showing the mean value, standard deviation, 't' value and its LS for general management problem scores of small-scale stainless steel manufacturers based on the location of their industry.

S.No.	Location	N	Mean	SD	Std. error mean	't' value	LS
1.	Urban	264	24.55	2.768	0.170	9.97	0.01
2.	Rural	101	27.48	2.704	0.269		

It is clearly evident from the results that the urban-based stainless steel manufacturers face relatively lesser general management problems (24.55) compared to the rural based stainless steel manufacturers (27.48). It is evident from the 't' value that the difference between the two groups viz., rural and urban small-scale stainless steel manufacturers are statistically significant (9.97) at 0.01 level. Hence the researcher concludes that the mentioned hypothesis is accepted. It is thus clear from the result that, there is significant difference in the general management problems faced by the both rural and urban based stainless steel manufacturers.

FINDINGS AND SUGGESTIONS:

From the above analysis the inferences are made. Accordingly the suggestions are given below:

1. It is suggested that the procedures for loans can be reduced and simplified.
2. Improvement in transportation is more beneficial to heavy industry than to light industry because of their effects on the movement of raw materials.

3. High need achievement is a major determinant of entrepreneurship development. Therefore if the average level of need achievement in a society is relatively high, one would expect a relatively high amount of entrepreneurship in that society. Small-scale manufacturers have to consult the Director of industries and the small industries service institute (SISI) located in that respective state.
4. Small-scale stainless steel manufacturer should undergo periodical training programmes with some of the following objectives:
 - To enable him to take strategic decisions.
 - To enable him to build an integrated team to fulfill the demands of future.
 - To develop a broad vision to see the business as a whole
 - To enable him to rate his product and industry to total environment.
 - To find what is significant in it and to take it into account in his decisions and actions.
 - To enable him to cope with and co-ordinate all relevant paper work, most of which is statutorily obligatory.
 - To make him accept industrial democracy, that is accepting workers as partners in enterprise.

Policy Oriented Suggestions

The researcher suggests the government and other related bodies to take more flexible policies on the following areas of Small-Scale Stainless Steel Manufacturers: Registration of unit, Arranging finance, Providing land, shed, power, water etc., Guidance for selecting and obtaining machinery, Supply of scarce raw materials, Getting licenses/import licenses, Providing common facilities, Granting tax relief or other subsidy, Offering management consultancy, Help marketing product, Providing information etc.

Sustaining Suggestions

Help modernization, Help diversification/expansion/substitute production, Additional financing for full capacity utilization, Deferring repayment interest, and Diagnostic industrial extension/consultancy source, Production units legislation/policy change, Product reservation/creating new avenues for marketing, Quality testing and improving services, Need based common facilities center.

If the suggestions offered above are implemented, no doubt, the small scale stainless steel manufacturers in Tamilnadu will take its new path and causes for economic growth of the state and country.

CONCLUSION

This study on small scale stainless steel industries have identified many of their problems scientifically and have provided suggestions. There is a broad scope for further research and continuous improvement on the existing emerging problems of small scale stainless manufacturers. An organization comes into existence only because of the efforts put in by a person, who would be prepared to shoulder the responsibility of taking the enterprise with him. For that, the person must have special quality that is known as 'Entrepreneurship'.

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