

Analysis of Business Environmental Aspects and Entrepreneurial Strategy - Case Study of a Cluster of Bell Metal Enterprises in West Bengal, India

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Abstract

This paper focuses on business environment aspects and strategic choices and their interrelation that have a bearing on the operation of enterprise owners in an industrial cluster. Environmental issues are reflected in the labour, machinery and other input condition, access to finance, competition from substitute products, marketability based on easy transport etc. While strategic choices focus on the direction that a firm nurtures in mind and through which the goals are expected to be achieved. This study is based on primary survey covering sixty bell metal enterprises in the Nadia district of West Bengal in India. Likert scaling has been used for capturing the environmental and strategic perception of the entrepreneurs. Factor analysis based on principal axis factoring with varimax rotation has been used to analyse the impact of multiple perceived environmental and strategic variables. Further canonical correlation analysis has been used to find the degree of correlation between the set of business environmental variables and that of strategic components. The study helps isolate major variables that have a bearing on perceived environmental and strategic components. The analysis suggests that choice of strategic variables by enterprise owners is usually in coherence with the environmental aspects affecting the business.

Keywords: Environment, Strategy, Canonical, Exploratory Factor Analysis

Introduction

The concept of entrepreneurship is too complex to be explained by a single set of factors. Combining the definition of Schumpeter, Kirzner, Bygrave and Hofer, an entrepreneur is defined as one who perceives a profit opportunity and undertakes an organisation to initiate newer product and technology to achieve the objective with some degree of risk.

The blossoming of the process of entrepreneurship is usually supposed to be conditioned by the psychological factors and mental make-up to accept challenges, motivational factors that goad him to launch new ventures and socio-economic and cultural environment pervading around him. The drive to launch a manufacturing unit and continue it through the support of off-springs and hired labour specially in the neighbourhood of an industrial cluster, is conditioned by the aptitude and orientation to take risk and mental and psychological upbringing to face challenges in uncertain market condition together with a set of external factors conducive to flourishing of business which is clubbed as entrepreneurial environment. It encompasses a host of overall economic, cultural, social and political dimension that promote or even sometimes may also discourage entrepreneurial propensity of an individual. The entrepreneurial environment, generally speaking comprises a variety of forces that are beyond the control of the entrepreneur thus, it can create both opportunities and threats for

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firms (Bourgeois, 1980). Gnyawali and Forget grouped the entrepreneurial environment into five dimensions—Govt policies (import/export restrictions, entry barriers etc.), socio-economic conditions (public attitude towards entrepreneurship, presence of experienced entrepreneurs etc.), entrepreneurial and business skill(entrepreneurial training programmes, availability of information etc.), financial support to business (venture capital, low cost loan)and non-financial support to business (counselling and support services). This view is also corroborated by the remarks of Lee and Petersen (2000) when they hold that entrepreneurial success is not only a condition of traits and behaviors of individuals but also the environment in which entrepreneurship takes place. Wilken (1979) visualises the importance of a conducive socio-economic environment to the growth of entrepreneurial activities. While environmental variables have a bearing on the structure and performance of an industrial enterprise, the strategic components adopted to achieve the functioning and influencing the structure are no less important.

Michael Porter is recognized as a great contributor to the strategic issues in the perspective of maintaining business. According to Porter (1996) a strategy can be seen as a combination of activities. Strategy means creating connection in the activities of a firm. If there was only one ideal position, there would be no need of strategy. His idea regarding positioning school has been a pioneering one in the domain of strategy. It advocates that a business should try to improve financial performance by achieving ‘competitiveness through positioning’, which helps detect whether a firm’s profitability lies above or below the industry average. Porter’s positioning school rests on the assumption that the industry environment largely determines the firm’s freedom of choice of action. In other words, the environment has great influence on choice of firms’ strategies. The underlying logic of the positioning approach is to first understand the environment and next position/status of the firm with regard to choice of strategy. Miller and Frisen (1883) observed that though there have been a number of studies involving the relation between environment and structure on one hand and relating to strategy and structure on the other, the third aspect covering the link of environment strategy relation has been rather neglected. Such studies have not been adequately taken in developing countries. In this context it seems imperative to undertake a study (i) for identifying the important environmental challenges faced

by entrepreneurs, that have a bearing on their functioning in the context of some industrial cluster in West Bengal, India (ii) for making out the strategies preferred by such entrepreneurs and to focus on their dimensions and (iii) to find the relationship between environmental and strategic aspects.

Literature on Business Environment and Strategic Issues

Klapper et al., (2007) conceptualises a favourable business environment in terms of the leeway embedded in regulatory environment that promotes the launching and operation of a business. It encompasses issues like starting a business, dealing with licenses, employment and retrenchment of workers, registering property, access to credit, protecting investors, paying taxes, cross border business etc. The level of economic development and functioning of institutions in a country have a bearing on the environment in terms of quality of governance, access to capital, labour and other resources, marketability opportunities, tax and subsidy policies etc. The business environment influences the dynamics of entrepreneurship in any country and attitude of the prospective entrepreneurs.

Extending the aforesaid dimension, there have been some studies which focus on an extended dimension of external environmental factors such as the business environment (e.g., government regulation and access to financing), socio-cultural factors (e.g., the social status of entrepreneurs and the value placed on innovation), and political factors (e.g., democracy), that shape investors’ motivation and intentions (Brandstatter, 1997; Begley & Tan, 2001; Perotti & Volpin, 2004). Wang et al., (2001) and Aldrich (2000) opine that external environmental factors are more useful in understanding business start-up than personal traits. The blossoming of the type and functions of entrepreneurship are often said to be shaped by the presence of certain factors in the external environment of the entrepreneur which is often beyond his control. Borkowski and Kulzick (2006) conceptualize the interplay between entrepreneurship and environment as follows:

- new venture strategies are formed in response to environmental forces;
- entrepreneurs are usually unsettled in case of political interference; and

- unstable environments are not conducive to growth prospects.

There are different ways to look at strategy and the position strategy takes in an organization and the management process. Mintzberg (1990) views strategy as indicative of a plan, a ploy, a pattern, a position or a perspective - the 5 Ps. He defines strategy in terms of a process. He considers strategy as a *pattern* in a stream of decisions. While streams of behaviour can be segregated, strategies as an integrated whole can be identified as a pattern of consistent behavioural norm. Van Gelderen, Frese and Thurik (2000) regard strategies at the individual level as plans for actions that influence the achievement level. The concept of strategy focuses on how an entrepreneur tries to reach a goal. Chandler (1962) sees strategy in terms of growth and strategic decisions are linked with the long-term health of an enterprise. At the initial phase it involves plants, sales offices, or warehouses in a single industry, a single location, and performance of a single function. In the event of its success, the company is likely to follow a predictable plan. He distinguished the following types of strategy: volume expansion, geographic expansion, vertical integration and product diversification. Seth and Thomas (1994) provide the following definition of strategy: 'A strategy is the pattern or plan that integrates an organization's major goals, policies and action sequences into a cohesive whole. A well-formulated strategy helps to marshal and allocate an organization's resources into a unique and viable posture based on its relative internal competencies and shortcomings, anticipated changes in the environment, and contingent moves by intelligent opponents'.

Data and Methods

The data were collected from the clustered firms producing bell metal items in Dharmada region of Nadia district in the state of West Bengal in India. A sample of 60 firms was covered in the study on the basis of face to face interview with the owner of the firms, based on a pre-structured questionnaire. The firms were selected on the basis of random sampling method out of a total population 150 units. The owners were favoured as respondents to the questions, since they shouldered the day to day management responsibility and actively participated in overall decision making process. Tabular analysis has been carried out in order to show the relative

strength of perception of entrepreneurs regarding business environmental variables and strategic components. Likert scaling has been resorted to for this purpose. Exploratory factor analysis based on principal axis factoring with varimax rotation has been resorted to in order to shorten the impact of multiple perceived environmental and strategic choice responses in terms of latent components called factors. Further canonical correlation analysis has been carried out in order to find the degree of correlation between the set of business environmental variables and the set of strategic components, the strength of link between which is likely to influence the level of performance of an enterprise.

The firm owners were asked several questions regarding their strategic and environmental perceptions on the basis of a selected set of statements which they were asked to rank. In some cases some of the enterprise owners had to be convinced about the purpose of this survey and sometimes the specific meaning of the statements had to be narrated to them multiple times for eliciting their response. The outcome of the responses based on Likert scaling for both environmental and strategic variables are represented in several tables below in terms of mean, standard deviation, percentage of responses greater than or less than mean etc.

Analysis of Environmental Aspects

Economic environment reflected in the labour, machinery and other input condition, access to finance, competition from substitute products, as well as marketability based on easy transport etc. have a bearing on the level of effort put forth by potential enterprise operators. Further socio-political environment embedded in attitude of local govt., regulatory measures, ecological norms, infrastructural condition etc. also shape the behaviour of firms. The level of access to financial facilities and attitude of concerned banking officials greatly influence the business decisions and strategies that might be resorted to by the enterprise owners. Labour market, availability of raw material/machinery on hire purchase on easy terms, facilitate the operation of the entrepreneurs. The perception on the part of the firm about marketability of their product is one important dimension that entices them to the industry. Without adequate market opportunities firms are likely to scale down their operation or leave the industry.

Competition from substitute products however reduce the prospect of growth that the enterprise owners might be aspiring after. The local infrastructural advantages are often observed to influence the production decision and incentivise strategies for business growth. Further attitude of local Govt and level of implementation of regulatory measures have an impact on the intensity of productive activity and associated business behaviour by the entrepreneurs. Again the extent of imposition of ecological standards and administrative procedure also have a bearing on the status of operation of enterprise owners.

Since it is not easy to capture the perception of the enterprise owners about the importance and impact of business environmental factors, questionnaire has been designed in such a manner that the attitude and perception of entrepreneurs towards environmental factors can be recorded. This has been done on the basis of use of 5 point Likert scaling whereby scores attached on each of

the environmental components by all the selected survey respondents have been considered for further analytical processing. Altogether ten business environment components have been considered. Similar method has also been followed with respect to strategic variables.

From the table 1 below it is evident that the mean Likert score helps the perception of importance and impact of the environmental issues. Using 5-point Likert scaling, it is observed that transport and marketability is considered to be the major environmental factor followed by congenial rules & regulation relating to the registration, non-strict ecological laws, easy administrative procedures (regarding permits, quota etc.) etc. Excepting the issues involving access to financial facilities, exposure to competition from substitute producers, labour market condition, marketing scope and administrative intricacies, majority of the respondents asserted their perceptions on the higher side of the mean value.

Table 1: Mean and Standard Deviation of the Environmental Variables

<i>Environmental Variable</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>% Greater or Equal to Mean</i>	<i>% Less than Mean</i>
Access to Finance from Institutional Source	2.05	0.85	13.3	86.7
Attitude of Local Government	1.62	0.85	56.7	43.3
Competition from Substitute Product	2.38	0.85	33.3	66.7
Level of infrastructure (electric power, transportation, communications, etc.)	3.78	0.85	71.7	28.3
Labour Condition	3.00	0.85	41.7	58.3
Machinery on Hire Purchase	3.23	0.85	50.0	50.0
Availability of Raw Materials	3.28	0.85	55.0	45.0
Rules & Regulation Relating to the Registration	3.53	0.85	53.3	46.7
Enforcement of Ecological Laws	3.47	0.85	53.3	46.7
Transport & Marketing	4.00	0.85	18.3	81.7
Administrative procedures (to acquire permits, etc.)	3.30	0.85	45.0	55.0

Source: Author Calculation based on Field Survey 2016

Factor analysis has been employed in order to express the variability among observed, correlated environmental variables in terms of a potentially lower number of unobserved variables called factors. It seeks to find out the association of multiple observed environmental variables that have similar patterns of responses with some latent (not directly measurable) variable. The significance of factor analysis in the context of perceived environmental variables is reflected in the following table 2.

Table 2: KMO and Bartlett's Test in case of Environmental Variables

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.608
Bartlett's Test of Sphericity	Approx. Chi-Square	175.423
	Df	55
	Sig.	.000

Source: Author Calculation based on Field Survey 2016

Sampling adequacy based on Keiser-Meyer-Olkin measure is found to be 0.608 and Bartlett's test of Sphericity was significant at 1%. The results in table 3

below, identifies 3 factors based on exploratory factor analysis, which explain 44.72 percent of the cumulative variance.

Table 3: Factor Matrix and Communalities in Case of Environmental Variables

<i>Environmental Variable</i>	<i>Factor Matrix^a</i>			<i>Communalities</i>
	<i>Factor 1</i>	<i>Factor 2</i>	<i>Factor 3</i>	
Level of infrastructure (electric power, transportation, communications, etc.)	.827			.687
Availability of Raw Materials	.736	.369		.678
Transport & Marketing	.645	.112	.283	.509
Labour Condition	.409	-.221	-.311	.312
Competition from Substitute Product	-.344	.104		.130
Enforcement of Ecological Laws	.163	-.800		.669
Attitude of Local Government		.684		.475
Rules & Regulation Relating to the Registration	.389	-.556	.261	.529
Access to Finance from Institutional Source		.102	.531	.302
Machinery on Hire Purchase	.158	.131	.488	.280
Administrative procedures (to acquire permits, etc.)	.380	.100	-.440	.348
% of variance	20.827	15.127	8.768	

Source: Author Calculation based on Field Survey 2016

Extraction Method: Principal Axis Factoring

a. Attempted to extract 3 factors. More than 10 iterations required.

The *Factor Matrix* shows the factor loadings prior to rotation which are correlations between the variable and the factor. Low correlations (with value 0.3 or less) are not accounted since these are probably not meaningful anyway. The first factor embraces all the components excepting Attitude of Local Government and Access to Finance from Institutional Source. The factor loadings show that the factors are fairly desirable with seven variables in the first factor having value greater than 0.30. It explains 20.83% of total variance. It can be called as Business Opportunities. The second factor contains ten variables and explains 15.13% of total variance. However only four variables Availability of Raw Materials, Enforcement of Ecological Laws, Attitude of Local Government and Rules & Regulation Relating to the Registration contain loadings which have reasonably higher absolute values. This can be called as Regulatory Support. The 3rd factor contains 6 variables and explains 8.77% of total variance. However only four variables, Labour Condition, Access to Finance from Institutional Source, Machinery on Hire Purchase and Administrative

procedures (to acquire permits, etc.) have relatively higher absolute loadings. This can be referred to as Input Market Condition.

Factor analysis uses variances to produce communalities between variables. The variance is equal to the square of the factor loadings. The communality is the variance in the observed variables which are accounted for by a common factor or *common variance*. The communality is the summation of the squared correlations of the variable with the factors. The values in the table 3 represent the factor loadings and how much the variable contributes to each factor in this case, it contributes the most to Factor 1. The calculated communality shown above means that 69% of variable 1 can be predicted based on the infrastructure of the three factors; hence, the communality is the variance accounted for by the common factors. A particular set of factors is said to explain a lot of the variance of a variable if it has a high communality. In this context Level of infrastructure, Availability of Raw Materials, Enforcement of Ecological Laws, Rules &

Regulation Relating to the Registration and Transport & Marketing appear significant as a high % (greater than 50%) of their variance is explained by the 3 factors Business opportunities in the cluster of firms appears as most important conducive factor for initiating business operations. Regulatory support emerges as the next important factor for sustaining the business performance followed by the emergence of input market condition which is conducive to growth of the enterprise through better profitability.

Analysis of Strategic Aspects

Focus on strategic choice has an important role in the firms' achievement process. The perceived status of strategic choices provides the direction that a firm nurtures in mind and in which way the goals are expected to be achieved.

In order to withstand the forces of competition, sustained attention is given in improving the quality of the product so that the market share can be maintained or enhanced. Better quality is linked with improved productivity. The entrepreneurs are often rather small and suffer from lack of adequate finance. Hence strategic focus is given on increased capacity utilization through better productivity. Unused capacity is likely to increase implicit cost. Strategic diversification is adopted to produce alternative good in order to cope with the uncertainties in market demand associated with a single product. Entrepreneurs often seek to widen their command over local people through engendering opportunities for new job. Automation is a cherished strategic apparatus which is desired for quicker and better finished production. Further searching for market opportunities in distant locations apart from local area often surfaces as an important strategy.

From the table 4 below it is evident that increasing the productivity is the most important strategic choice on the part of the surveyed enterprises, followed by enhanced capacity utilisation, quality improvement etc. Excepting reduction in cost, majority of the respondents expressed their perception on the higher side of the mean value. Least variability in perception about strategic choices is observed with respect to diversification strategies.

Table 4: Mean and Standard Deviation of the Strategic Variables

Strategy Variable	Mean	Standard Deviation	% Greater or Equal to Mean	% Less than Mean
Improving Quality Standard	3.95	1.06	76.7	23.3
Improving Productivity	4.05	1.01	81.7	18.3
Increasing Capacity Utilisation	3.97	1.12	75.0	25.0
Expanding Capacity	3.92	1.08	76.7	23.3
Diversification Strategies	2.70	0.92	51.7	48.3
Reduction in Costs	2.98	1.20	50.0	50.0
New Job Creation	3.28	1.21	65.0	35.0
Automation	3.75	1.07	65.0	35.0
Increasing Sale in Outer Locality	3.20	1.30	63.3	36.7

Source: Author Calculation based on Field Survey 2016

Factor Analysis of Strategic Variables

Factor analysis has been carried out in order to reflect the importance of joint variation of observed strategic variables in response to unobserved latent variables' the sampling adequacy based on Keiser-Meyer-Olkin measure in respect of strategic choices is found to be 0.829 and Bartlett's test of Sphericity significant at 1%. The results in table 6 below, identifies 2 factors based on exploratory factor analysis, which explain 55.08% of the cumulative variance.

Table 5: KMO and Bartlett's Test in case of Strategic Variables

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.829
Bartlett's Test of Sphericity	Approx. Chi-Square	268.400
	Df	36
	Sig.	.000

Source: Author Calculation based on Field Survey 2016

Only two factors emerge as latent measures that encompass the effect of the strategic variables. The first factor embraces all the nine strategic components each of which have reasonably high correlation with the factor. This can be termed as diversified strategy. The second

factor contains only three components like Increasing capacity utilisation, Expanding capacity and new job creation that have loadings, i.e. correlation (in absolute value) greater than 0.3 with the factor. This factor can be termed as Business growth.

Table 6: Factor Matrix and Communalities in Case of Strategic Variables

Strategy Variable	Factor Matrix ^a		Communalities
	Factor 1	Factor 2	
Improving Productivity	.834	-	.698
Increasing Capacity Utilisation	.819	-.391	.823
Expanding Capacity	.775	-.510	.861
Increasing Sale in Outer Locality	.715	.290	.596
Improving Quality Standard	.713	.219	.556
Automation	.689	.131	.492
New Job Creation	.600	.358	.488
Diversification Strategies	.457	-.115	.222
Reduction in Costs	.454	.121	.221
% of variance	47.074	8.013	

Source: Author Calculation based on Field Survey 2016

Extraction Method: Principal Axis Factoring

a. 2 factors extracted. 18 iterations required.

The joint contribution of the factors that explain a substantial variance of the strategic components is reflected in the communality score. Here expanding capacity and increasing capacity utilisation have high communality value followed by improving productivity and so on. All the three components in the 2nd factor termed as business growth have reasonably high communality and their variation is well explained by the two factors. However some other components also have high communality value. The implication is that all the enterprises have the lurking strategic focus on growth in volume, however due to paucity of fund and other opportunities often they face acute problems.

Canonical Correlation Analysis

Improved performance is a crucial objective of sustainable business growth and is closely linked to perceived condition of business environment and stress on corresponding strategies. Business environmental

conditions are multi-dimensional in character and in many ways they govern the choice of and stress on strategies that have ultimate bearing on a firm's profitability.

The correlative inter-linkage between a set of environmental variables and choice of a set strategies which shape the performance of a business enterprise can be suitably represented by considering the canonical correlation analysis. Canonical correlation is a multivariate statistical technique, which measures the strength of relationship between two composite sets of variables. In this case, each set is considered as a latent variable based on measured indicator variables in its set, and the canonical correlation is optimized such that the linear correlation between the two latent variables is maximized. The objective of canonical correlation is not to model the individual variables, but to explain the relation of the two sets of variables. In this analysis, we seek to find such a linear combination of one set of variables that produces the largest correlation with the second set of variables. This linear combination or "root" is extracted, and the process is repeated for the residual data, with the constraint that the second linear combination of variables must not correlate with the first one. The process is repeated until a successive linear combination is no longer significant. Maximum number of canonical correlations equals the number of variables from the smallest variable set.

A typical use for canonical correlation in the experimental context is to take two sets of variables and see what is common among the two sets. Square of the coefficient represents the amount of variance in one canonical variable (C.V) accounted for by the other C.V. It is also called shared variance between two C.Vs. It is directly analogous to the R^2 effect in multiple regression.

In our analysis, canonical correlation is obtained between 2 groups of variables. In one group, we have considered all the environmental variables and in the other, we have included the perceived responses regarding strategic choices. The results of the analysis are given in the following Tables. Here maximum nine canonical correlations are possible. Corresponding to the number of variables included in the second set. Eigen value represents the extent of shared variance between two sets of variables. The root of the Eigen value indicates the value of canonical correlation. First coefficient value corresponding to canonical dimension F1 represents the highest interrelation possible between first 2 sets of canonical variables.

Table 7: Canonical Correlations between Environmental Factors and Strategic Factors

<i>F1</i>	<i>F2</i>	<i>F3</i>	<i>F4</i>	<i>F5</i>	<i>F6</i>	<i>F7</i>	<i>F8</i>	<i>F9</i>
0.818	0.658	0.626	0.537	0.417	0.381	0.295	0.169	0.078

Source: Author Calculation based on Field Survey

Successive values represent correlation between the residuals of the variables. In order to test the significance of this correlation, a test statistic is developed called Wilks' Lambda. Its significance is taken care of by considering the value of the F statistic.

The first test of dimensions tests whether all nine dimensions are significant, i.e. whether both pairs of canonical variates in the dimensions are significantly related in a linear form. The next test tests whether dimensions F2, F3, and F4 combined are significant and so on.

Table 8: Wilks' Lambda Test

<i>Lambda</i>	<i>F</i>	<i>DF1</i>	<i>DF2</i>	<i>Pr > F</i>
0.051	1.525	99	286.4709	0.004
0.153	1.131	80	262.2654	0.236
0.269	0.987	63	237.0224	0.510
0.443	0.790	48	210.7199	0.833
0.622	0.625	35	183.3145	0.950
0.754	0.545	24	154.7077	0.959
0.882	0.388	15	124.6266	0.980
0.966	0.203	8	92	0.990
0.994	0.095	3	47	0.962

Source: Author Calculation based on Field Survey 2016

Table 9: Eigenvalues

	<i>F1</i>	<i>F2</i>	<i>F3</i>	<i>F4</i>	<i>F5</i>	<i>F6</i>	<i>F7</i>	<i>F8</i>	<i>F9</i>
Eigenvalue	0.669	0.433	0.392	0.288	0.174	0.145	0.087	0.028	0.006
Variability (%)	30.083	19.472	17.638	12.974	7.834	6.537	3.910	1.279	0.272
Cumulative %	30.083	49.555	67.193	80.167	88.001	94.539	98.449	99.728	100.000

Source: Author Calculation based on Field Survey 2016

Concluding Remarks

The factor analysis helps isolate major variables that have a bearing on perceived environmental and strategic components. An organisation chooses a definite strategic course of business in coherence with the environmental aspects affecting the business. The canonical correlation analysis suggests that the set of major perceived

Generally, a canonical correlation that is less than 0.30 (even if it is significant) should not be taken under consideration, since it is trivially small and the percentage of variance shared by the two canonical variates is only 9 % or less. In the present case although 6 canonical correlations appear to have high (> 0.30) value, only the first is significant as evident from Wilks' lambda test. The Eigen value reflects that the first coefficient explains about 67% of shared variance.

Overall it is evident that the set of environmental variables is quite organically associated with the set of strategic components. While the perceived environmental aspects have the flavour of the structure that are deemed fit with the operation of the enterprises, the strategic variables cover the importance of the aspects of conduct in the context of S-C-P(structure-conduct-performance) model. The prevalent conditions of business environment especially that of level of infrastructure, availability of raw materials, marketing opportunities, rules and regulation imposed by Govt, etc. are taken seriously by the surveyed enterprises and accordingly they try to adjust their strategic choices reflected mostly in capacity utilisation and expansion, achievement of better productivity, up-gradation of quality, extension of sales etc.

environmental variables have a reasonably close linear association with the set of deemed strategic responses that are mostly considered fit in the relevant context. However environmental components like access to finance, competition from substitute product, labour market and hire purchase condition are not considered to be favourable by the bell metal item producers in the region. Although these are often regarded as important

for flourishing the business, the entrepreneurs here feel critical about the absence of any sound scope of access to finance and availability of skilled labour that might help enhance their product diversification possibilities and up-gradation in quality. Further, diverse type of quality but low cost substitute items from producers at Moradabad in UP is exposing them to fierce competition for sustenance in the market. The surveyed enterprises are mostly family-run having profitable ancestral business with some degree of certainty. But lack of formal training opportunities adversely affects their ability and vision and undermines the spirit to resort to innovation exercise. The production by the enterprise owners is mostly tied to the demand and input assistance served by the local mahajans. They place order of production of particular items on the local bell metal item producers and hence they get assured of the marketability of their product. The tie-up with mahajans weaken their diversification scope. In many cases the enterprise owners cannot draw substantial production order from the mahajans because of low capacity base. The desire to dominate the supply market and maintaining close bond with the mahajans drive them to focus on capacity expansion and full use of the existing capacity. Perceived congenial infrastructural facility, availability of required raw material, transport and marketing access, non-strict Govt regulatory measures spur their desire for expanding capacity, utilisation of existing capacity and better productivity even if they have to take loans from mahajans for the purpose in the event of poor access to institutional finance. Further the enterprise owners cannot put much stress on reduced cost since with existing technology and input supply by mahajans, together with deprivation of adequate institutional financial support, they can little venture for resorting to cost reducing automation processes.

Further since the dependence of the individual artisans on mahajans hamper their access to bigger market, a marketing and sales channel is required to promote the production and profitability base of this cluster. With a broader and direct business interaction with a bigger market, it will help create a sort of brand establishment and add value to the cluster products. Also this would spread the awareness in the market as well as increased demand and trust.

The quality of the products should also be enhanced in order to sell them in more upmarket stores or in metros

where they can fetch a better price. Although this Bell Metal Utensils Cluster's technique is unique to the bell metal work area, there hardly exists any linkages with technical institutions, design schools, and marketing bodies which could uplift the working skill in this craft cluster. Both product and process upgrading should be assigned top priority for the promotion of this craft. Introduction of new innovative and fashionable products and product quality up-gradation should be undertaken in view of changing attitude of buyers and to avoid competition from substitute products. Sheet work can be extended further as an opportunity to develop new range of products like- Jewellery, Mementos, Art Work, Mask, Lamp Shades, Modernized Dining Range, Coasters, etc. The antique finished and toned pattern can be developed in coherence with contemporary tastes/trends.

Traditional techniques need to be modernized with better practices & precision, production from moulds could be adopted, Lathe machine needs to be adopted to reduce hard labour; training opportunities in use of precise tools and techniques are needed for promoting the work pace in such cluster.

Strong Govt/ Non Govt financial support and motivation as well as better training opportunities for creating a skilled labour base are required to enable the entrepreneurs undertake the drive of installation of better machineries and strategic diversification commensurate with capacity expansion and better productivity achievement.

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