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Mission Statement

The CMA professionals would ethically drive enterprise globally by creating value to stakeholders in the socio-economic context through competencies drawn from the integration of strategy, management and accounting.

Vision Statement

The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally.

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Foreword

It gives me an immense pleasure to note that The Institute of Cost Accountants of India in association with Entrepreneurship Development Institute of India, Gujarat has published the Research Bulletin, Volume-41, No. IV January 2016 issue. I believe this volume will undeniably help to enrich the thought process of the readers and prospective researchers in the relevant fields of studies.

Micro, Small and Medium Enterprises (MSME) sector has emerged as an effervescent and dynamic sector of the Indian economy over the last five decades. MSMEs not only play a vital role in providing large employment opportunities at comparatively lower capital cost than large industries but also facilitates in industrialization of rural & backward areas; thus, reducing regional disparity, assuring more equitable distribution of national income and wealth. MSMEs are complementary to large industries as ancillary units and this sector contributes a lot towards socio-economic sustainability of the nation. MSME can be the backbone for the existing and future high growth businesses with both domestic and foreign companies investing under the 'Make in India' initiative and this will prove to be a significant step in the area of indigenization. In the competitive and globalised market, cost control becomes an important element of strategy as unit margins shrink and new products and applications are harder to find. Cost & Management Accountants can help the SME sector in managing costs effectively and thereby establish a competitive edge to become world-class players.

The bulletin comprises of comprehensively researched topics on a variety issues on MSME authored by researchers, academicians and professionals.

I hope the readers would love to go through them.

CMA P. V. Bhattad
President
The Institute of Cost Accountants of India

Message from the Director, EDI

It is indeed encouraging to see how entrepreneurship has entrenched itself across disciplines and sectors. I believe entrepreneurship is one of the most important factors that can accelerate growth, and the sooner it gets embedded across industry and academia, the better for the economy. Once this phenomenon becomes widespread, results will be pretty conspicuous. I am quite hopeful about an upbeat entrepreneurial environment laden with innovative micro, small and medium enterprises. The inhibitions related to entrepreneurship are fast getting displaced and the realization that entrepreneurship could be a trusted ally in dealing with the vulnerabilities of society is taking over. Promoting Micro, Small and Medium enterprises (MSME) could be the gateway to economic development. It gives a massive boost to growth orientation and skill sets, thus evolving as a guided strategy for social and economic change. The contours of the MSME sector are wide and undulating – ranging from traditional to high – tech enterprises with varying degree of skills and competencies. This enhances its employment potential and makes it a major contributor in industrial production and exports. But at the same time, one does notice scope to make interventions to streamline the factors of credit, marketing, technology, infrastructure etc. to MSMEs. I appreciate Government's interest towards assigning more dynamism to the sector and taking measures to equip it in a way that it is able to survive the downturns and crises. The Make in India initiative and Startup India Policy are intelligent moves to harness entrepreneurial spirit and complement the sector. Business incubators, which are coming up in huge numbers across regions, will further align technical support with innovative ideas. Business an cillarisation by multinational companies involving MSMEs is also gaining attention and will sure make the sector play a pivotal role.

All in all, there are opportunities galore on the national and international fronts and with their accent on inventiveness, flexibility and compliance, MSMEs hold potential to navigate growth for the nation.

This Research Bulletin jointly developed by ICAI & EDI signifies contribution of the MSME sector in furthering the cause of economic development of the nation. I am sure researchers, academicians, policy makers and practitioners will be able to derive learnings from the papers published in this special issue.

Dr. Sunil Shukla

Director

Entrepreneurship Development Institute of India (EDI)

Chairman's Communiqué

It is my pleasure to place before you the Research Bulletin, Vol.41, No. IV, January, 2016 issue of the Institute. This is a collaborative publication on the theme "MSMEs : Engine of Economic growth" in association with Entrepreneurship Development Institute of India, Gujarat. Our Research Bulletin mainly emphasizes on pragmatic research articles and has wide readers from the fields of academics, research, corporate houses and practitioners.

I take this opportunity to express my gratitude for my fellow members of the Research, Innovation and IT Committee, esteemed members of the Review Board, the eminent contributors, the entire research team of the Institute and Entrepreneurship Development Institute of India, Gujarat for their earnest effort to publish this volume in time.

The present volume of the Research Bulletin contains varied issues of interest like Argentine Cluster Policy, Entrepreneurship Development, SME Exchange, etc.

I welcome the readers to come forward with their valuable feedback towards upgradation of Research Bulletin.

Suggestions for improvement of this Research Bulletin shall be highly appreciated.

CMA Avijit Goswami

Chairman, Research, Journal & IT Committee
The Institute of Cost Accountants of India

Editor's Note

Greetings!

It is our pleasure to bring out the current volume of the Research Bulletin, Vol.41 No. IV, January, 2016 issue on the theme "MSMEs : Engine of Economic growth", an offering of the Directorate of Research & Journal of the Institute in association with EDI, Gujarat. We publish both theme based and non theme based articles on the contemporary issues. Inputs are mainly received both from academicians and the corporate stalwarts. Our attempt is to draw attention towards environmental, social, economical and market-related issues, so that the researchers and decision-makers can enrich their knowledge base and can take strategic decisions deliberately.

We are extremely happy to convey that our next issue of Research Bulletin, Vol.42, No. I April, 2016 will be based on the theme "Contemporary Issues in Securities Markets" which would be a collaborative publication in association with National Institute of Securities Markets (NISM), an educational initiative of SEBI.

We look forward to constructive feedback from our readers on the articles and overall development of the Research Bulletin. Please send your mails at research.bulletin@icmai.in. We express gratitude to all the contributors and reviewers of this important issue and wish our readers get plenty of academic inputs from the articles.

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Argentine Cluster Policy: The Case of Local Systems of Production Promoted by SEPYME

Abstract

In this article, a public programme to foster associative production among MSMEs in Argentina was presented. This policy has been built on top of the theoretical background on clusters in combination with the theory of the National Innovation System. This approach leads to a theoretical blend that implies a particular understanding of how is the production within the firm and their interaction with other enterprises in a given environment. In the first section of this article theoretical insights on the cluster paradigm was presented. Afterwards, insights were applied to the case of the Programme Local Systems of Production (LSP) in Argentina, which has proved to be an effective policy instrument for economic development, some case studies inserted to provide a clear picture on how the Programme is implemented. Subsequently, a selection of aggregate results of the Programme with final remarks was presented.

Key Words

Cluster Policy, Local Systems of Production (LSP), Micro, Small and Medium Enterprises (MSMEs).

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Introduction

State driven industrial policies are a necessary condition to lead the economy on a path of sustained growth. Both climbing on the value ladder and the development of linkages in a value chain require policies addressing sectoral constraints and bolstering a balanced regional development. These policies are successful only when economic development is based on a social capital whose forces are channelized through a coordinated set of public and private institutions that

feed the innovation process. Thus, public policies to spur production and particularly policies to promote the formation of clusters are invaluable instruments for local economic strengthening. In turn, positive synergies derived from association among firms need to be articulated with national public investments oriented to improving infrastructure and the national innovation system. These institutional efforts will eventually result in technological learning and subsequently they will translate into both more value added and improved labour conditions.

In the first section of this article we present theoretical insights on the cluster paradigm. Afterwards, in section 2 we examine how such insights are applied to the case of the Programme Local Systems of Production (LSP) in Argentina, which has proved to be an effective policy instrument for economic development. In section 3 we present two case studies to provide a clear picture on how the Programme is implemented. Subsequently, a selection of aggregate results of the Programme is presented in section 4. Finally, in section five we draw some final remarks.

1. Definitions and Concepts

Before getting into the theoretical debate on clusters some light needs to be shed on the conceptual ambiguity of the term cluster. Specifically, when applying in emerging market economies a policy that has been shaped in developed countries, conceptual flaws become evident. The specificity of spatial and historical contexts as well as the combination of social and economic circumstances with technologi-

cal capabilities in a given territory makes it difficult transferring lessons from one case to another. Therefore, establishing generic rules for enhancing outcomes of public policies becomes problematic.

The techno-productive paradigm in the context of globalization has lead firms in the developed countries to outsource some links of the value chain (Williamson, 1985) thereby weaving flexible and adaptable provider networks in emerging market nations. The combination of the global level with the local level -glocalization- has acquired an increasing relevance in the reconfiguration of the space of production. The traditional explanation based on Marshallian agglomerations of firms looking to obtain economies of scale offers insufficient answers to the current world economy (Marshall, 1920). A new perspective on Porter (1998) hypothesises about the competitive advantages of nations understands clusters as regional agglomerations of closely related industries in a particular historical stage¹. There are two perspectives on agglomeration approaches: in the first place there is a classical vision associated with economies of scale and benefits of externalities. Orthodox approaches accept state intervention because in this case the market optimum is below the social welfare. Secondly, there is another approach that seeks to surpass the logic of economic optimality by emphasizing the logic of social development, where only a system of institutions coherently articulated will lead to economic and social development and eventually to technological independence (Naclerio

¹ Porter's Diamond approach is analysed in the Cluster Development Executives Programme (EDI).



et al., 2010). In this article we will put the eye on the latest approach.

I.a) The Rationale of Local Systems of Production

Theoretical approaches to joint production of different enterprises have evolved following two paths. One of them focuses on economics of innovation, where innovation becomes a collective action where most actors of the production chain are involved. The other path focuses on the study of paradigmatic cases of successful agglomerations of firms such as the Silicon Valley and the Italian industrial districts (Bianchi and Lee, 1994, Bianchi et al. 1997). Nevertheless, the historical circumstances of these experiences require specific analyses based on the drivers transforming the context of the development process.

The interactive innovation model (Kline and Rosenberg, 1986) was the first theoretical progress involving joint production among different enterprises, thereby surpassing the Schumpeterian approach based on the linear innovation model (Figure 1). The critical shortcoming of linear models is the lack of systemic reinforcement. According to the linear logic, the innovation process follows a rigorous sequence of phases: basic research, applied research, development, production, and marketing. The process advances from left to right with an "output" at every linkage that is eventually taken as an "input" by the subsequent linkage. The "process" is planned so that each linkage has to carry out a well-defined role.

Alternatively, an interactive model includes the same actors that are in a

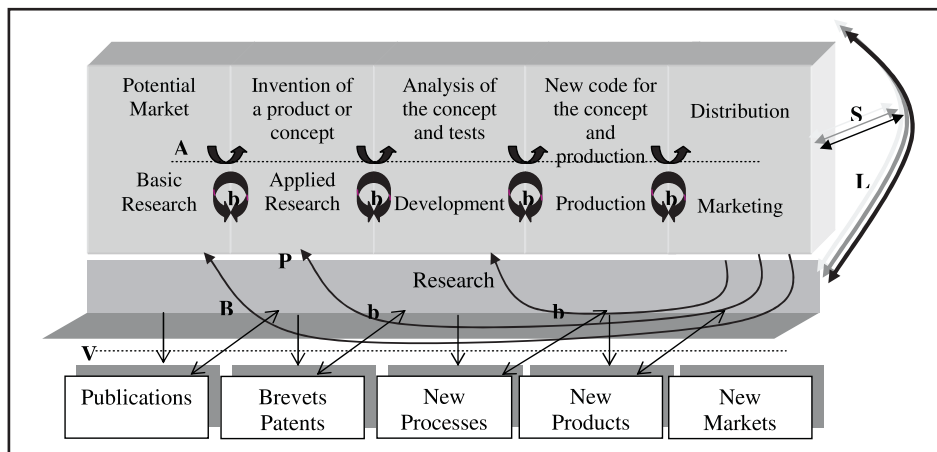
linear model but in the later case connections among innovation phases go beyond the closest backward link and the next forward link, allowing connectivity and interaction among every phase. Thus, outputs of the different stages can be used as inputs by any stakeholder in the process. This requires a systemic connectivity among actors since they rest on a dynamic body of knowledge (Naclerio, 2004).

Associative processes generate a continuous feedback between science and technology and the demands and proposals coming from productive sectors. The innovative process and the social accumulation of knowledge result from a coordinated effort by enterprise members at different levels - including the research department-, from coordination with other enterprises in a joint strategy, and mostly from coordination with the institutions that promote and articulate the National Innovation System.

The research based process of innovation and associative production presented in Figure 1 is highly dependent on the social knowledge base, which assumes that society is able to grasp and incorporate knowledge that has been accumulated along time to subsequently use, adapt, improve and transfer such knowledge to the productive system. Thus, associations among enterprises must be based on institutions promoting these constructive processes.

In short, the step forward from the linear vision of innovation to the interactive model has meant a theoretical milestone for understanding the advantages of associative production among enterprises.

Figure 1: Chain link Model (Kline and Rosenberg 1986)



- A: Core chain of innovation
- b: Short feedback loops
- B: Long feedback loops
- P: Problem solving by the means of interaction of research and new concepts
- L: Linkage between the social base of knowledge and useful research in the innovation process
- S: Support of research in every scientific field aiming to produce a new item or process and value the innovation
- V: Valorisation Chain

Source: Naclerio (2004). Modified and adapted from Kline and Rosenberg (1986), p. 290

I.b) Networks and Production Systems

The interactive model is only a first step to understand why association of firms

enhances systemic competitiveness (Naclerio 2010). A key point to understand is why firms decide to undertake joint strategies, why business networks with shared infrastructure and knowledge are built, and why should the government implement policies to promote clusters.

The study of networks leads to a multiplicity of concepts (cluster, complex, association, system, cooperation agreement, etc.) that are frequently used as synonyms. Although their meanings imply different nuances, all of them are linked to the economic theory of innovation. Figure 2 presents a summary of definitions for our theoretical framework².

² The following Cluster definition is used in the Cluster Development Executives Programme conducted by EDI: "Sectoral and geographical concentration of enterprises, in particular Small and Medium Enterprises (SMEs) facing common opportunities and threats". (See Reading Material Vol. 1, Cluster Development Executives Programme, p. 5) In turn, the cluster is conceived as a "system" in which different actors and institutions interact in a particular historical context (See Sanjay Pal, "Concept of SME Cluster Development & Cluster Development Approach").

Figure 2: Definitions of Networks and Systems used in the Economic Theory

Clusters	<ul style="list-style-type: none"> •A business cluster is a geographic concentration of interconnected businesses, suppliers, and associated institutions in a particular field. (Porter, 1998)
Industrial Districts	<ul style="list-style-type: none"> •Conglomeration of small firms in a given territory that pursuit improving their productivity by the means of the division of labor among them (Marshall, 1920)
Local Systems and Arrangements of Production	<ul style="list-style-type: none"> •Group of firms located in the same territory where they interact, cooperate and learn from each other and from other agents such as the Government, Business Chambers, Financial Institutions, and Research Centers (SEBRAE 2005, 2008; SEPYME 2008)
Networks	<ul style="list-style-type: none"> •Explicit or implicit agreements among firms to innovate, accumulate knowledge, and take advantage from a given infrastructure.

Source: Naclerio et al. 2010.

The formation of these networks derives from the new industrial policy emerged in the Post-Fordism technological paradigm (Dosi, 1982). The analytical framework is an industrial organization where *Industrial Policy equals Technology Policy*.

Networks are built on both firms and the institutions that connect them. **Firms are improved by this institutional fabric, adding dynamism to the development process.** Specifically, firms transfer knowledge to the knowledge social base while at the same time they feed from such base. Therefore, the firm abandons its black box fashion since the series of relationships established in the network shed light on the links of the productive chain. Evolutionary approaches examine the firm from within in order to explain the social and

technological structures "inside the black box" (Rosenberg, 1982). Firms are therefore consumers and producers of *knowledge*, which clearly has different implications from consuming and producing *information*. The difference between knowledge and information is particularly relevant for the evolutionary theory (see for example Cohendet, 1998) which highlights that information flows freely and it is accessible upon request or payment while knowledge requires an effort to be assimilated. In addition, only some parts of knowledge can be codified while the rest of it remains tacit.

I.c) Networks and Productive Systems

From a historical perspective the idea of network of production became relevant with the proliferation of post-Fordist outsourcing practices. Extensive literature emphasizes the links between

individuals -firms- establishing a collective body inserted in a given political, cultural and institutional environment (Granovetter, 1985). These networks, particularly producers and users of technology (Lundvall, 1988, 1992) are an input of the national innovation system through the accumulation of collective knowledge. Individual innovator firms are atypical cases (OECD, 1992). Cooperation agreements among firms are a strategy to produce enhanced innovations as well as to increase protection against the competition. Problems that arise in industrial reorganisation are mostly around the institutional modes of coordination that configure the exchange of information and knowledge. Specifically, these institutional modes are: cooperation, hierarchy and trust. Thus, production networks establish routines (Johnson and Lundvall, 1994) or regular behaviours that operate as rules. This type of routine entails an organisation with goals that go beyond the objectives of the individual firm.

In sum, based on this systemic logic a set of institutions able to articulate economic sectors aiming at the promotion of economic development should be considered. This can be undertaken locally by empowering actors capable of fostering association among firms. As a result, the systemic association is inserted into the local development in the framework -and construction- of the National Innovation System.

I.d) Systemic Networks and Cluster Policy

The perspectives of the interactive model of innovation and national innovation systems are added to local approaches of development and production clusters. In the same way, the conceptualisation of local development (e.g., Albuquerque 1997, 2004, Vázquez Barquero 1986, 2000) goes beyond the articulation of local actors to reach the role of the national state in the promotion of a balanced development among regions.

Joint production of goods and services is based on a particular configuration of the productive fabric. This configuration depends on several dimensions that surpass the efficiency criterion.

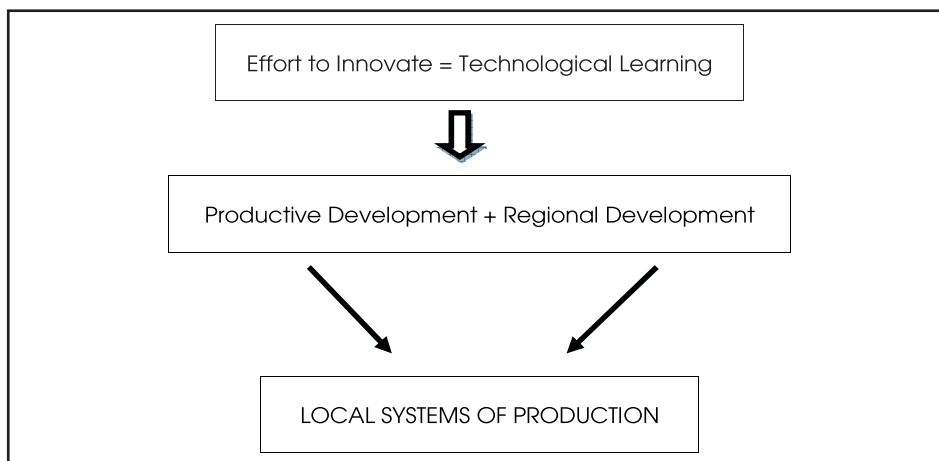
Local Systems of Production are:

"Systems linking units of production, in particular micro, small and medium enterprises (MSMEs) and institutions based in a territory, aiming to develop joint strategies and actions."

Association among firms can take place among productive units of the same economic sector as well as among enterprises belonging to the same value chain. The LSP arise as an industrial policy instrument to enhance the technological capabilities of more developed regions and to redirect the productive forces to less developed regions. The creation of local systems of



Figure 3: Creation of Local Systems of Production



Source: Naclerio et al. 2010.

production may induce firms to undertake joint learning processes and research in which tacit knowledge is transferred. The LSP must strengthen the Social Knowledge Base and the National Innovation System.

Thus, association among firms makes viable to carry out projects that would be beyond the bound of possibilities for individual firms acting alone, opening a window of opportunity to enhance access to the knowledge social base. The latest reinforces the technology basis of the associated firms and their institutional links with the society as a whole.

II. Promotion of Productive Clusters and Networks with Impact on Regional Development

Agglomerations of micro, small and medium enterprises (MSME) are essential for economic development.

The fabric of MSME faces several challenges, such as Darwinian natural selection (Nelson and Winter, 1982) and the struggle to grow subject to regulations that are often adverse. However, analysis of the MSME requires a close examination since it may become hazy due to the inclusion of heterogeneous actors in this same category. Notwithstanding the limitations imposed by the diversity of firms belonging to associative groups -due to the multiplicity of sizes, market position and ability to negotiate conditions- an important part of the constraints on the growth of MSMEs does not follow from these differences but from isolation. Indeed, isolation has negative effects on the scale and structure of production making difficult overcoming the critical barrier to grasp and develop new technology. Forsaking the isolation to face the risks implied by joint strategies represent a challenge for the firms involved but also to institutional actors

at the local, regional, and national levels.

Many of these firms that share the same geographical space and even the same productive specialization withhold cooperation or associations, thereby refusing links that would enable them to improve their performance through common action. Thus, a large number of economic regions have been unable to fully exploit the opportunities offered by the macroeconomic context aroused after the 2001/2002 Argentine crisis, which has become much more favourable to productive activities by MSMEs. Their productive structures present significant degrees of disruption (derived from the neoliberal macroeconomic policies of the 1990s) that becomes evident through technological lags and a poor capacity for innovation (Naclerio 2004, 2010).

Given this heterogeneous context, enhancing the implementation of public policies for promoting and strengthening ties between MSME becomes critical³. However, implementation of such policies previously require a close analysis of the productive reality in each of the various regions in order to make use of the appropriate tools -with the required flexibility, simplicity of procedures, speed for launching the projects, as well as the support provided to producers throughout the entire cycle of the project.

³ In this sense, EDI highlights the importance of the participation of SMEs in Clusters, considering that it can "give rise to external economies (...), favour the emergence of specialized technical administrative and financial services; [and] create a conducive ground for the development of inter firm cooperation and specialization as well as of cooperation among public and private institutions to promote local production, innovation and collective learning." (See Reading Material Vol. 1, Cluster Development Executives Programme, p. 5).

II.a) The Programme LSP

In the same line of the theoretical background revised, the Secretary for Small and Medium Enterprises of Argentina (SEPyME) runs the programme "Local Systems of Production - Promotion of Productive Clusters and Networks with Impact on Regional Development" as a policy instrument to boost development at the local level. The goal of this programme is the promotion of sustainable regional development by the means of the formulation and implementation of activities oriented to MSMEs that constitute or that may create a LSP. The purpose of the programme is to strengthen and integrate the productive fabric at the regional level by fostering associations among firms in a framework where the public sector (national, provincial, municipal), academic institutions, and research and development institutes (public and private) play a decisive and articulated role⁴. In other words, the theoretical foundations of the programme are closely linked to the local and network theories of innovation systems discussed above.

The activities of the Programme LSP are displayed throughout the Argentine territory taking into consideration the specificities of each region, therefore conferring comprehensive and flexible support adapted to the particular circumstances of each associative group. This support takes into account

⁴ A summary of clusters actors (SMEs, related enterprises, public and private service providers, centres of higher education and research, entrepreneur groups, large enterprises, financial institutions, NGOs, State and Local Governments, and National Government and related bodies), their role and comparative advantage in certain functions can be found in Reading Material Vol. 1 Cluster Development Executives Programme, pages 19-24).



certain basic guidelines that aim at reaching the goal.

One of the essential guidelines is adjusting the support instruments (for investment, technical assistance, training, foreign trade, etc.) to the specific needs and demands of different associative groups. The later switches the traditional logic of supplying "pre-established packages of solutions" which have mostly benefited large size enterprises or groups of firms in a dominant position. The programme surpasses a mere "consultancy" limited to the formulation of projects. Indeed, the programme looks to move to a new logic with greater flexibility and realism going beyond a "natural selection" where firms need to adapt to existing instruments. Instead, the instruments have to fit the needs of the firms and take into consideration the constraints influencing the evolution of them.

An additional dimension of the programme is to seek an articulated strategy with other agencies and national programmes with goals related to supporting the productive sector. Particularly, the Programme LSP has implemented several projects in cooperation with the Ministry of Labour, Employment and Social Security, the Ministry of Social Development, the National Institute of Industrial Technology and the Secretary of Education, Science and Technology, among others.

Finally, an additional guideline includes developing an active connection with the production and development agencies at the provincial and municipal levels. The role of local governments becomes a key concern due to the

direct contact that usually exists between the groups of firms and these levels of government. This implies that state driven policies for development of regional production complexes would lack consistency without an active participation of these local actors.

Based on these guidelines and criterion, the Programme LSP has developed the three components explained below to organise the assistance to the associative groups of MSMEs:

- i. **Fostering new partnerships among firms to develop associative groups.** The main goal is the creation and development of associative groups⁵ by providing technical and financial support for the formulation and implementation of an Associative Work Plan (AWP). Each AWP entails one year of collective work following a previously established plan of joint activities. Cooperatives can also apply to this component.

The implementation of each AWP requires hiring a coordinator who must ensure a smooth interactive functioning among group members. Specifically, the job of the coordinator includes: a) an assessment of both the economic sector and the group of firms or cooperatives; b) promote and strengthen mutual relations among participating production units and among the later with institutions in order to build a common vision and strategy, c) provide assistance in the formulation of projects to find funding and business opportunities,

⁵ The associative group may be integrated by five or more MSMEs.

d) define and implement strategic actions towards the development of the group or cooperative in the medium and long terms; and e) disseminate material advertising the products they sale.

The coordinator needs to comply with a specific profile and meet with certain requirements that vary for each project. In particular, the coordinator must: f) have an expertise on the productive sector of the project; g) keep a fluid relationship with most important local actors and institutions operating locally; h) have coordination skills, including the ability to mediate to reach compromises among group members, create consensus and generate a proactive attitude; and i) formulate projects. Therefore, the performance of the projects depends heavily on the coordinator. The Programme LSP has supplied training sessions to coordinators in annual workshops aiming at underpinning their technical expertise. In addition, the training programmes have provided opportunities to exchange experiences and develop networking among the coordinators and among the clusters they represent.

- ii. **Grants to bolster pre-existent groups of associated firms.** Addressed to pre-existent and well established associative groups that may or may not have participated in component 1 of the Programme LSP. Analogously to component 1, non-refundable funding will be provided for an investment to improve the situation of the whole

group. Funding from this line is generally used for purchasing equipment, investments in fixed and intangible assets, and projects of organisational innovation that can be collectively capitalised. The economic viability of each project is approached with both a profitability criterion and also in terms of the potential of the group forming the LSP. Cooperatives can also apply to this component.

- iii. **Grants to develop investment projects related to Research & Development & Innovation.** This component is oriented to firms located in an industrial park or industrial area. The project can be submitted by a private institution (i.e.: Chamber) or by a strengthen group of firms (i.e.: Consortium). In this case, firms have to identify common needs and constraints that can be solved by the means of R&D Laboratories or Centre for Industrial Services (Common facility centres).

These guidelines and components are applied following a sequence of steps according to a methodology for the operation of the Programme. In the following section we present an overview of such operative methodology.

II.b) Work Methodology and Selection of Projects

The work methodology of the Programme LSP involves a comprehensive assistance to each group since the moment they make contact with the Programme until the AWP has been formulated and implemented. In most



Table 1. Component of Assistance

Component	1. Associative Work Plan (AWP)	2. Investment Project (associative production or commercialisation)	3. Investment Project to R&D i Laboratories or Centre for Industrial Services (common facility centres)
Economical Assistance	Coordinator to formulate and monitor the AWP	Grants to implement the Investment Project	Grants to implement the Investment Project
	100% of the salary (first 6 months) 50% of the salary (remaining 6 months)	60% of the Investment Project	60% of the Investment Project
Beneficiary	Associative Groups of SMEs or Cooperatives	Associative Groups of SMEs or Cooperatives (Component 1) Strengthen Associative Groups of SMEs or Cooperatives	Chambers or Strengthen Associative Groups of SMEs
Project		Value added to primary sector	
		Development or strengthening of the industrial production	Development and innovation of products and industrial process
Duration	One year	Less than one year	Less than one year

Source: Table elaborated by the authors

cases this methodology follows the steps below:

- 1) The group submits an AWP summarising the main features of the project and delineating the joint activities to carry out for the period of one year. In this step, technical officers of the Programme get actively involved promoting positive synergies among group members and also with national and regional institutions and agencies. Thus, the technical assistance aims at developing a balanced project with potential for both enterprises and the region where they operate. At the end of this process, the project is evaluated and can be approved or declined.
- 2) At the same time, the group suggests a coordinator who will be the counterpart of the technical officials of the Programme.
- 3) Once the AWP is approved, an agreement is signed between the group members and the Programme LSP. Afterwards, the coordinator begins his/her work with the group receiving a salary from the Programme.
- 4) The coordinator becomes the link between the firms and the Programme. The later receive information from the coordinator allowing the monitoring of the evolution of the project. The performance of the coordinator is assessed through required documentation monthly sent by him or her and through regular monitoring by LSP technical officers.

- 5) Projects to obtain a grant are formulated. Investment projects are evaluated taking into consideration economic, technological, regional and social viabilities. In the case of the pre-existent groups, the request of a grant is evaluated by the technical team of the Programme to determine whether or not the proposed investment will complete the process of clustering that had started earlier.

Therefore, the Programme assists the groups before the project has formally started and continues after it has formally come to an end. Before signing the agreement, the assistance takes place through technical support to develop a project that meets the needs of the group. The technical officers keep a close interaction with the group during the process of shaping the project and along the execution of it they monitor if the evolution goes according to the plan.

In order to facilitate a deeper understanding of the Programme LSP and the assistance provided to associative groups of MSMEs, in the next section we present a succinct description of two case studies only to illustrate how the Programme is implemented.

III. Case Studies

1. Cluster Forza Heating in Coronel Suarez⁶

The Cluster Forza Heating includes five metal-mechanic enterprises: three turneries, one blacksmith shop and a factory of trailers. This associative group

⁶ Coronel Suarez is a small city in Central (Pampa) Region, Argentina.



is located in Coronel Suarez, a small city of about 29.000 residents in the Pampeana Region of Argentina (see Figure 4). These MSMEs decided to undertake a joint project to develop a central heater that works with firewood. The innovation of this heater is an air forcer that sends hot air by a system of pipes from the combustion chamber to others rooms of the building, thereby optimising the use of firewood by reusing gasses that are usually emitted to the atmosphere.

The initial experience manufacturing this product led them to produce and sale 12 stoves only, due to a limited productive capacity derived from the lack of tools for mass production. The incorporation of new technology allowed them to replace some product parts that were made by hand with parts made in a serial way, improving the efficiency of the productive process as well as the quality of the stoves.

Thus, in November, 2009, the group applied to the Programme LSP with several goals, including consolidating the joint production, creating a new business unit to work on improvements of the product, incorporating technology to increase the scale of production and enhance quality, developing a marketing strategy for this central heating including enhancing market access by creating a website, editing a video to demonstrate how the product works, brochures, etc.

The project involved two lines of assistance from the Programme LSP. During the AWP, the group was benefited by the assistance of a coordinator to organise workshops for strengthening the collective work, planning, produc-

tion and management. They also worked in the organisation for using the equipment they had in common by enacting a regulation document. The coordinator also assisted them to apply to the Line 2 of the Programme LPS (investment project) to obtain financial assistance. After approving the submission, the group received from the Programme a grant to establish a collective legal form, create the business unit, incorporate equipment (a guillotine, several tool organisers, a welder, a matrix to shape the parts), setting up a website and develop marketing guidelines (catalogue, brochures) as well as conducting market research. The Municipality of Coronel Suarez and the Council for Production and Development of Coronel Suarez were also part of the institutional network supporting the group.

2. Cluster of Carpenters in Caimancito⁷

The associative group of Carpenters in Caimancito has 25 members; most of them sole proprietorship - carpenters. The group is located in Caimancito, a small village with 5.400 residents in the North-West region of Argentina (see Figure 4). The economy of this community is based on agricultural crops (tomatoes, corn, French bean, cucumber and zucchini) as well as carpentry. Indeed, the town has about 90 carpenter workshops that use lumber from the surrounding natural forests.

The main problem faced by these carpenters was that their products (chairs, tables, beds, windows, doors, and other items) were not standardised

⁷ Caimancito is a small village in North West Region, Argentina.

and lacked a variety of designs. The quality of the products also needed to be improved. In 2007, they applied to the Programme LSP to receive assistance to organise a co-operative and to improve collective planning, production and management. They obtained assistance with a coordinator to organise workshops and gain legal advising and training to arrange that at least some carpenters were able to work in a shared space. The coordinator also assisted them to prepare an investment project to apply for a grant of the Programme LSP. After accessing to this funding, the group built a warehouse and a wood drying place was installed to dry the lumber from local natural forests for common use, which enabled a significant improvement in productivity and in the quality and of the furniture. In addition, the common space allowed a working place with appropriate health and safety conditions at work. After this first stage of the project, the group applied to a second grant from the Program LSP (which is granted only on exceptional basis) for increasing the value added of the furniture. Specifically, the focus was on product design, painting and polishing. In this regard, group members received training in furniture design and polishing machinery was purchased. Other component of the assistance was to gain access to higher market segments through website and marketing guidelines, and therefore be able to obtain higher prices for the furniture.

The institutional network involved with this project was integrated by the Assembly of Small and Medium Businessmen, the National Institute of Industrial Technology (INTI, Spanish acronym), the Ministry of Social

Development, the Municipality of Caimancito, and the Ministry of Industry of Argentina through two programmes: LSP and the National Plan of Design.

The implementation of this methodology has led to very good aggregated results for the Programme. These results are explained in the next section.

IV. Indicators and Results obtained by the Programme LSP

Since the Programme LSP was launched in 2007, 214 associative groups and cooperatives integrated by 3.777 MSMEs have been assisted. Providing employment to more than 16.000 people, these groups are heterogeneously located in 22 provinces of Argentina (from a total of 24) and belong to different productive sectors. Analysing the results in a regional perspective, it can be observed a tendency that breaks the economic concentration in the central region of the country. The "Pampeana" region accumulates 66% of the total population of Argentina and contributes with 75% of GDP. In this region the LSP Programme concentrates the 48% of the total projects which is the greatest in absolute terms but implies a redistribution of resources in relative terms. In other words, the share of total projects assisted by the Programme in any region is greater than the share of the population of it and its contribution to the national GDP, at the expense of the "Pampeana" region.

Similar results can be observed with the amount of grants. The share of grants in any region is greater than their share of total population and their contribution to total GDP, with the exception of the

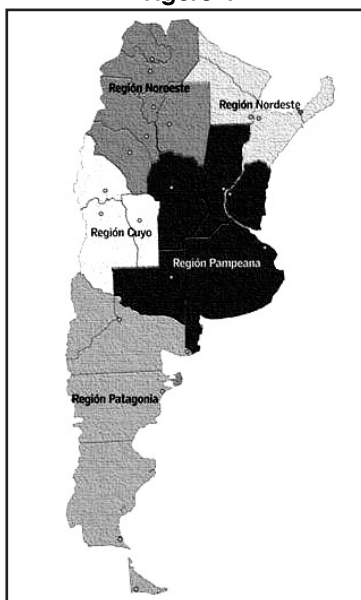


"Pampeana" region (Table 2, Figure 4). Economic sectors assisted are Primary, Agribusiness and Food (43 %); Metal mechanic (14 %); Clothing and Leather Goods (9 %); Software and information services (8 %); Wood and furniture (7 %) and Tourism (7 %). Although there is a strong preponderance of Primary, Agribusiness and Food projects, it is important to highlight the wide variety of activities within this sector. The main activities are beekeeping (21%); pork production (9%); dairy (5%), tea and "yerba mate" (5%) (Table 3).

Region	LSP Programme Projects (%)	Population (%)	Contribution to GDP	Grants (%)
Pampeana	48%	66%	76%	55%
Northeast (NE)	18%	9%	5%	16%
Northwest (NW)	16%	12%	5%	13%
Cuyo	10%	7%	6%	8%
Patagonia	8%	5%	8%	8%
Total	100%	100%	100%	100%

Source: Table elaborated by the authors. Map Source: Educ.ar

Figure 4



From a joint analysis of the sectoral and territorial dimensions, it is possible to conclude that there is no pattern of specialization in the Programme LSP. The Programme has assisted associative groups from different sectors regardless their geographic location and economic sector, facilitating a more balanced growth. The projects are oriented (theoretically and in practice) to develop clusters in all the links of the value chain, and there are not concentrations of high value-added projects in some provinces and low value added in others. Regarding the type of integration, horizontally-integrated groups are predominant. Two thirds of the projects belong to associative groups with horizontal integration. It is also observed that projects belonging to lower value-added sectors are more likely to integrate horizontally (Naclerio and Trucco, 2015).

Table 3: Projects, Assisted MSMEs and Employment related to the Programme LSP by Economic Sector

Sector	Projects	Assisted SMEs	Employment
Primary and Agribusiness	47	945	1.539
Food	44	1.845	3.219
Metallurgical	29	250	6.753
Clothing and Leather Goods	20	139	884
Software and information services	18	181	1.930
Wood and furniture	15	191	725
Tourism	14	89	570
Cultural Industries	7	23	60
Biotechnology / Bioengineering	5	49	149
Handicrafts	4	28	38
Chemical	3	3	60
Graphic Design	2	13	28
Electronic	2	13	79
Mining	2	6	150
Ceramics	1	1	18
Glass	1	1	59
Total	214	3.777	16.261

Source: Table elaborated by the authors.



V. Final Remarks

In this article we have presented a public programme to foster associative production among MSMEs in Argentina. This policy has been built on top of the theoretical background on clusters in combination with the theory of the National Innovation System. This approach leads to a theoretical blend that implies a particular understanding of how is the production within the firm and their interaction with other enterprises in a given environment. On the one hand, clustering and associative production among enterprises is presented as a productive structure prone to technological learning. On the other hand, the environment where the associative group of enterprises operates is a specific territory with a certain institutional setting that can be favourable or unfavourable to such technological learning. The visible hand of the state is a necessary condition to transform the territories into friendly environments to technological learning as well as to guarantee a balanced economic development throughout the regions.

The Programme LSP has been designed and implemented following such logic and has been successful in promoting increasing levels of value added, quality improvements, technological learning, and market access by the means of collective work among MSMEs. A sample of two case studies from a total of 214 has been selected to present a representative picture of how the Programme LSP works and the effects that are pursued for the groups of micro, small and medium enterprises. In particular, the assistance granted by

the Programme with non-refundable funding for the salary of a coordinator for the group as well as to pay for a significant fraction of an investment project for joint production, added to the technical support provided by the technical officers of the Programme LSP and to the institutional support in the articulation of an institutional network with local and national agencies, has proved to be a valuable instrument for promoting a balanced development throughout the Argentine territory.

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ASEAN-6 SMEs to the Overall Economic Growth of ASEAN

Abstract

The ASEAN Economic Community Blueprint adopted under declaration on the 40th Anniversary of ASEAN and the 13th ASEAN Summit in Singapore, among other parameters; focus on equitable economic development (AECB, 2008). SMEs development with several pre-determined objectives was an important point of consideration under it. Out of the objectives, clearly laid down under ASEAN Economic Community Blueprint clause C1; one objective aims at increasing the contribution of SMEs to the overall economic growth and development of ASEAN as a region. The research note aims to present an overview of the SMEs contribution by ASEAN-6 (Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand) to the overall economic growth of ASEAN. The research note would address the theoretical background and definitions related to SMEs. It is to be noted that SME definitions differ within ASEAN-6 with every country giving its own Basic SME Definition.

Key Words

ASEAN-6, ASEAN, SMEs, GDP, Employment

Badar Alam Iqbal

Mohd Nayyer Rahman

Introduction

Association of Southeast Asian Nations is a conglomeration of ten countries namely; Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. ASEAN was established on 8th August, 1967 in Bangkok. Indonesia, Malaysia, Philippines, Singapore and Thailand are the founding fathers of ASEAN. Later on, the conglomeration was joined by Brunei Darussalam, Viet Nam, Lao PDR and Myanmar in 1984, 1995, 1997 and 1997, respectively. Among several aims and purposes of ASEAN, one of the important aim is to accelerate the economic growth in the region through joint endeavours of the member states in the spirit of equality and partnership. On 40th Anniversary of ASEAN, the Vision 2020 was revised to form ASEAN Community with an objective of creating an economic and political community. The ASEAN Economic Community Blueprint adopted under declaration on the 40th Anniversary of ASEAN and the 13th ASEAN Summit in Singapore, among other parameters, focused on equitable economic development (AECB, 2008). Creation of ASEAN Economic Community represents opportunity to encourage investment in the region that must lead to



economic growth (Green, 2008). SMEs development with several pre-determined objectives is an important point of consideration. Out of the objectives, clearly laid down under ASEAN Economic Community Blueprint clause C1; one objective aims at increasing the contribution of SMEs to the overall economic growth and development of ASEAN as a region. The research note aims to present an overview of the SMEs contribution by ASEAN-6 (Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand) to the overall economic growth of ASEAN. ASEAN-6 is a club of two distinct groups, one characterised by countries having high income and the other characterised by middle and near-middle income. This has been concluded by David Jay Green (2008). The ambitious aspirations of ASEAN Economic Community in 2015 needs to be studied under the words of

researchers sceptical of ASEAN (Narine, 2008).

Theoretical and Conceptual Framework

SMEs Definition in Brunei Darussalam

SMEs are generally defined as those enterprises having 6 to 100 employees and constitute around 48.5% of all business establishments in the country. Statistics shows that 50% of businesses in Brunei are made up of Micro enterprises, having 1 to 5 employees; 46% represent Small enterprises having 6-50 employees and 2.5% of Medium enterprises having 51-100 employees. In the context of Brunei Darussalam, SMEs thus could be defined as those enterprises having 1-100 employees that contribute around 98.5% of the total business establishments by incorporating micro, small and medium enterprises.

Table 1: SME Definition in Brunei Darussalam

By Segment:	Criteria 1	Value
Micro	By number of employees	1 to 5
Small	By number of employees	6 to 50
Medium	By number of employees	51 to 100
Large	By number of employees	Above 100

Source: <http://www.asean.org/images/archive/SME/sme%20basic%20information%20-%20brunei%20darussalam.xls>

Table 2: SME Definition in Indonesia

Segment:	Criteria 1	Value	&	Criteria 2	Value
Micro	Asset	Maximum IDR 50 Mill (US\$ 4,760)	&	Sales/Year	Max Rp.300 Mill (US\$ 28,570)
Small	Asset	> IDR 50 Mill to IDR 500 Mill	&	Sales/Year	> IDR 300 Mill to IDR 2.5 Bill
Medium	Asset	> IDR 500 Mill to IDR 10 Bill	&	Sales/Year	> IDR 2.5 Bill to IDR 50 Bill

Source: <http://www.asean.org/images/archive/SME/sme%20basic%20information%20-%20indonesia.xls>

SMEs Definition in Indonesia

It is clear from Table 2 that two simultaneous conditions have been used in order to define SMEs in Indonesia. Business units that have assets worth more than 50 million Indonesian Rupiah (US\$ 4760) and up to 10 billion Indonesian Rupiah (US\$ 952333). In addition to this, another condition must

also be checked upon .i.e. sales/year (turnover per year). For a business unit to qualify as SME in Indonesia, the second condition must also be met. Under it, the sales per year must be more than 300 million Indonesian Rupiah (US\$ 28570) with an upper limit of 50 billion Indonesian Rupiah (US\$ 4761667).

SMEs Definition in Malaysia

Table 3: SME Definition in Malaysia

By Segment:	Manufacturing, Manufacturing Related Services & Agro Industries	Services, Primary Agriculture and Information & ICT
Micro	Sales turnover of less than RM250,000 OR full time employees less than 5	Sales turnover of less than RM200,000 OR full time employees less than 5
Small	Sales turnover between RM250,000 and less than RM10 million OR full time employees between 5 and 50	Sales turnover between RM200,000 and less than RM1 million OR full time employees between 5 and 19
Medium	Sales turnover between RM10 million and RM25 million OR full time employees between 51 and 150	Sales turnover between RM1 million and RM5 million OR full time employees between 20 and 50

Source: <http://www.asean.org/images/archive/SME/sme%20basic%20information%20-%20malaysia.xls>

Table 4: SME Definition in Philippines

By Segment:	Total Asset Value
Micro	P3,000,000 or less
Small	P3,000,001-15,000,000
Medium	P15,000,001-100,000,000

Source: <http://www.asean.org/images/archive/SME/sme%20basic%20information%20-%20philippines.xls>



Table 3 defines SMEs with respect to Malaysia. It uses mutually exclusive criteria, either on the basis of sales turnover or on the basis of full time employees. It is to be noted that no other country under ASEAN-6 has used the term 'full time employees'. According to this definition, SMEs are those business units that have sales

turnover between Malaysian Ringgit 250000 to Malaysian Ringgit 25 million.

SMEs Definition in Philippines

In Philippines, business units are treated as SMEs with respect to Total Asset Valuation. Total asset valuation is used by World Bank at global level.

Table 5: SME Definition in Singapore

By Segment:	Criteria 1	Value
Micro	Annual Sales Turnover	Less than SGD 1 million
Small	Annual Sales Turnover	More than SGD 1 million, less than SGD 10 million
Medium	Annual Sales Turnover	More than SGD 10 million, less than SGD 100 million

Source: <http://www.asean.org/images/archive/SME/sme%20basic%20informaion%20singapore.xls>

SMEs Definition in Singapore

Singapore uses the criteria of annual sales turnover to define SMEs. SMEs are business units having annual sales turnover between Singapore Dollar 1 million and Singapore dollar 100 million. Small enterprises are those that have annual sales turnover between Singapore dollar 1 million and Singapore dollar 10 million and large enterprises are those having annual sales turnover between Singapore dollar 10 million and Singapore dollar 100 million.

SMEs Definition in Thailand

No specific definition of SMEs is available

Limitations of the Study

The study is secondary in nature and

uses the data available on websites and academic databases. The researcher had access to limited academic databases. Time and cost constraint was also a limitation with respect to the present study. For the study the researcher had to rely on the government data by ASEAN which was not available for recent years. Due to this reason data for 2012 and 2013 was not incorporated due to unavailability.

Review of Literature

In recent years a growing interest in the importance of Small and Medium sized enterprises for economic growth has been observed in the literature, largely because this sector is responsible for the majority of employment generation in developed as well as in developing countries (Ayyagari, 2007). Previous studies related to SMEs in general and to

their economic contribution in particular identify their key importance in every economy. All over the world, SMEs are being supported on the grounds that they make substantial contributions towards competitiveness, productivity and aggregate economic growth (UNIDO, 2006). SMEs contribute to economic growth in several manners. One such method is their increasing involvement in international trade for which SMEs internationalise their activities (e.g. Coviello & McAuley, 1999; Ruzzier, 2006). It may be observed that SMEs contribute in economic growth through the process of innovation. Hussain, (2009) has identified the contribution of SMEs to Gross Domestic Product (GDP). The relationship between SME growth and economic development can also be developed due to its positive effects on economic development as it has been derived from previous studies (Gault, 2010). It has been identified that SMEs are of overwhelming importance for developing countries because they account for more than 90% of all firms outside the agriculture sector. For example, it was identified with respect to Asian region, that SME sector consists of more than 90% of all firms outside agricultural sector (Wattanaputtipaisan, 2003). Thus, SMEs are considered engine of economic growth and development especially in the developing countries. SME sector in developing countries is typically dominated by labour intensive and low technology firms that are likely to be related with necessity entrepreneurship (Poschke, 2013). With respect to ASEAN economies, studies have concluded that their development is integral to achieve long run sustainable economic growth (ASEAN, 2011). The contribution of SMEs to GDP has been in

previous years between 30% and 53% and towards exports between 19% and 31% (ASEAN, 2011). In early 2011, the Indonesian Ministry of Industry targeted exports worth \$200 billion, in which the SME was the most valuable sector (Pelita, 2012). Indonesian economy has seriously committed itself towards development of SMEs as an important foundation (Irijyantia and Azis, 2012). In a particular study, it was found that Indonesia's SMEs are surrounded by abundant resources and easy availability of human resources (Chaminade and Vang, 2008). SME has emerged as a priority sector in Indonesia for making economic policy target (Tambunan, 2008). SMEs may be regarded as backbone of Indonesian economy due to the fact that 99% businesses are represented by SMEs, which contributes greatly towards the revenues of the economy. SMEs represent more than 50% of Indonesia's total GDP and employs 97% of the labour force. The data of Ministry of Cooperation and SME lists 55,530,000 SMEs in Indonesia for the year 2011 (Chaminade and Vang, 2008). SMEs growth was stimulated due to proactive government support in Malaysia from 1996-2008. The government had taken direct initiatives over the period 1981-2003 when funds and strategies targeted the growth of industrial SMEs during Dr. Mahathir Premiership. The seeds are reaping the benefits till today by adding to the economic growth of the country as well as towards ASEAN as an economic region (Rasiah et al, 2011). Most of the economies are dominated by small and medium sized enterprises that make the largest contribution to the economy (Kruja, 2013). Collecting finance has always remained a big problem for the SMEs. According to Shen et al (2008),



SMEs in China obtain only 12% of their capital from bank loans, while their peers obtain 21% in Malaysia and 24% in Indonesia.

SMEs Contribution in Overall Economic Growth

Brunei Darussalam

As a percentage of private enterprises, SMEs in the region has always remained above 98% of the total private enterprises. This shows the importance of the SMEs and how much economic activities SMEs are generating in the region. In absolute terms, number of SMEs has declined after 2008. The reason may be closure of badly managed firms or due to lack of finance. It has been that financial performance of small firms depends not only on firm specific factors but also on

market features and especially on a country's economic and political risk (Majocchi et al, 2013). The highest absolute increase in the number of SMEs was in the period 2005-2006, when SMEs increased from 7610 to 8683 (an increase of 1073). In the same period, private firms had increased from 7716 to 8790 (an increase of 1074). It shows that 99.9 % increase was in SMEs while only an increase of 0.1% was in large private enterprises. The highest absolute decrease was in the period 2008-2009, when SMEs decreased by 355 firms (9150 in 2008 to 8795 in 2009). SMEs in Brunei Darussalam are approximately present in every type of industry but the top three industries where SMEs are present in large numbers are construction, wholesale and retail of motorcycles (wholesale and retail, repair of motor vehicles and motorcycles) and accommodation and food services.

Table 6: GDP by Sector (BND Million at current prices)

Sector	2004	2005	2006	2007	2008	2009	2010
Primary	150	150.2	128.7	127.3	129.7	141.9	128.2
Industrial	9028.4	11352.4	13336.9	13161.7	15117.5	10210.6	11262.9
Services	4127.4	4361.5	4760.2	5169.4	5150.7	5258.9	5476.3
Total GDP	13305.8	15863.9	18225.8	18458.4	20397.9	15611.4	16867.4

Source: <http://www.asean.org/images/archive/SME/sme%20basic%20information%20-%20brunei%20darussalam.xls>

Table 6 shows the GDP generation by SME under primary, industrial and services sector classification. With respect to primary sector the highest GDP generation was in the year 2005 and then there was decrease in GDP generation. However, the economy has

generated 141.9 BND million in 2009 to recover the previous year good figures. But again in the year 2010, GDP contribution by primary sector declined and reached 128.2 BND million. The industrial sector in Brunei is the highest contributor towards GDP. Table 6 clearly states the

following facts. Only industrial sector SMEs have shown GDP generation in five unit figures. The highest contribution of industrial sector SMEs towards GDP was in 2008 when industrial SMEs contributed 15117.5 BND million towards the GDP. SMEs coming under services sector have also contributed substantially towards GDP. In 2010, SME contributed 5476.3 BND million towards GDP under services sector. If compounded annual growth rate (CAGR) is calculated to compare the contribution towards the GDP by SMEs (classified with respect to primary, industrial and services sector), it makes the concept crystal clear. The compounded annual growth rate on GDP contribution by primary sector SMEs comes out to be negative i.e. -2.58 %. Industrial SMEs contributed with an overall CAGR of 3.75% towards GDP and SMEs involved in service sector contributed with a CAGR of 4.83% towards GDP. Thus, the service sector SMEs show the highest CAGR in contribution towards GDP while in absolute terms it is industrial SMEs that contributes maximum towards GDP in Brunei Darussalam.

Indonesia

Indonesian SMEs also play an important role in the economy by contributing both towards quantitative and qualitative parameters. Indonesian SMEs contributes towards entrepreneurship, innovation, employment, economic development and economic growth. GDP may act as a parameter of overall economic growth. Table 7 below represents all the necessary quantitative details with respect to Indonesian economic growth, GDP and Indonesian SMEs. An analysis of table 7 will bring following points of consideration. GDP

growth rate in the economy was highest in 2007. Since then it has declined but shown recovery in 2010. SME growth rate was highest in the year 2006 after which growth rate has declined. The decline in SME growth rate may be due to already existing large number of SMEs. The SMEs contribution to GDP in value terms has been increasing since 2005 and was highest in the year 2010 with contribution standing at 1282571.8 million IDR. The CAGR of GDP value contribution by SMEs comes out to be 5.54%.

In term of percentage SME contribution to GDP (calculated as GDP value contributed by SMEs to total GDP), it was highest in the year 2006 with 58.49% contribution. The important point to be noted is that Indonesian SMEs have always contributed more than 50% to the overall GDP. This shows their substantial contribution towards economic growth. SMEs have also contributed to exports and in terms of value it was highest in the year 2008 with a figure of 178008.3 million IDR. SMEs have contributed with CAGR of 9.71% towards the exports of Indonesia. In terms of percentage contribution to exports it was highest in 2005 (20.28%) and it is to be noted that its contribution has always remained more than 15%. It was argued in the previous sections that SMEs employ large labour force in developing countries. It would be interesting to study contribution of SMEs towards employment in Indonesia. Table 7 presents that in 2010, the number of people employed in SMEs in Indonesia were 99401775. In percentage terms, SMEs contribution to employment was 97.3% in 2009 which was maximum. However, the contribution of SMEs towards employment has never been less than about 96%. This shows the employment generation strength of SMEs in Indonesia.

Table 7: Indonesian SMEs relevant data

Data Name	Formula	Unit	2005	2006	2007	2008	2009	2010
GDP Growth Rate	$\frac{(X_2 - X_1) / X_1}{10}$	%	-	0.011	0.060	0.057	0.043	0.053
SME Growth Rate	$\frac{(X_2 - X_1) / X_1}{10}$	%	-	0.041	0.022	0.025	0.026	0.020
SME Contribution on to GDP (Value)	GDP value contributed by SMEs	Million IDR	9,79,501.3	10,35,615.2	11,00,670.8	11,65,753.1	12,14,725.3	12,82,571.8
SME Contribution on to GDP (%)	GDP value contributed by SMEs % to Total GDP	%	55.95	58.49	58.44	58.35	58.17	57.83
SME Contribution on to Export (Value)	Value of Export contributed by SMEs	Million IDR	1,10,338.1	1,23,767.9	1,40,363.8	1,78,008.3	1,62,254.6	1,75,894.9
SME Contribution on to Export (%)	Value of Export by SMEs as % of Total Export	%	20.28	17.95	17.66	18.10	17.02	15.81

Contd..

Table 7: Indonesian SMEs relevant data

Data Name	Formula	Unit	2005	2006	2007	2008	2009	2010
SME Contribution to Employment (Value)	No. of employment in SMEs	No. of Headcounts	835,86.6 16	879,09.5 98	904,91.9 30	940,24.2 78	962,11.3 32	994,01.7 75
SME Contribution to Employment (%)	No. of employment in SMEs as % of total employment	%	96.85	97.30	97.27	97.15	97.30	97.22

Source: <http://www.asean.org/images/archive/SME/sme%20basic%20information%20-%20indonesia.xls>

Malaysia

Malaysian economy has long been involved in formulation of policies to boost the small and medium sized enterprises. Table 8 below highlights the contribution of Malaysian SMEs towards overall economic growth of the ASEAN as a region. The GDP growth rate of Malaysia has increased from 5.3% in 2005 to 7.2% in 2010, though in between these years there was low GDP growth rate but eventually it recovered. On the other hand, the SME growth rate was highest in 2007 with a figure of 10% but since then it has declined to eventually recover at 8.4%. The SME contribution to GDP in absolute valuation terms was highest in the year 2010 with CAGR of 6.49%. SME contribution to GDP in percentage terms shows that consistently SMEs in Malaysia have contributed about 30% towards GDP and the highest contribution was in the year 2010 with a percentage contribution of 31.9%. The governmental figures for exports contribution (in value) are not available except for the year 2005 which stands at 116346 million RM that is 19% contribution. With the available data of four years (2005-2008) with respect to SME contribution to employment, the highest numbers of employees were in the year 2008 with 3684210 workers. In the same year i.e. 2008, highest was the SME contribution to employment in Malaysia with a figure of 58.9%. It would be justified to say that SMEs in Malaysia employ more than 50% of labour force. Another important point to be noted is that 90% of SMEs are in the services

Table 8: Malaysian SMEs relevant data

Data Name	Formula	Unit	2005	2006	2007	2008	2009	2010
GDP Growth Rate		%	5.3	5.8	6.5	4.8	-1.6	7.2
SME Growth Rate		%	6.9	7.4	10.0	6.4	0.4	8.4
SME Contribution to GDP (Value)	GDP value contributed by SMEs	Value in Currency (RM Mil)	1,30,173	1,39,800	1,53,814	1,63,733	1,64,400	1,78,275
SME Contribution to GDP (%)	GDP value contributed by SMEs % to Total GDP	%	29.0	29.4	30.4	30.9	31.5	31.9
SME Contribution to Export (Value)	Value of Export contributed by SMEs	Value in Currency (RM Mil)	1,16,346	na	na	na	na	Na
SME Contribution to Export (%)	Value of Export by SMEs as % of Total Export	%	19	na	na	na	na	na

Contd..

Table 8: Malaysian SMEs relevant data

Data Name	Formula	Unit	2005	2006	2007	2008	2009	2010
SME Contribution to Employment (Value)	No. of employment in SMEs	No. of Headcounts	31,72,117	32,57,309	35,29,121	36,84,210	na	na
SME Contribution to Employment (%)	No. of employment in SMEs as % of total employment	%	56.8	56.9	58.2	58.9	na	na

Source: <http://www.asean.org/images/archive/SME/sme%20basic%20information%20-%20malaysia.xls>

sector. This shows the type of SMEs that are in great number in Malaysia.

Philippines

The latest data of Philippines economy shows that 79.55% of SMEs are in service sector while 13.68% SMEs are in manufacturing sector. SME in other sectors excludes agro-based SMEs, stands at 6.09%. Thus, overall SMEs in Philippines represents service sector and SMEs would be contributing to overall economic growth through service sector. The GDP real growth rate was highest in the years 2007 and 2010 (7.3% in both) and in the period of five years (2007-2011) it has shown both trends of increase and decrease. For example, the real GDP growth rate declined from 2007 to 2009 but it increased in 2010 and again declined in the year 2011.

Philippines has not provided the details of SME contribution to GDP but has provided other parameters to measure overall economic growth. SME contribution to exports in percentage is not available for all years except for the year 2009 when it was 25%. With a single figure it would not be justified to reach to a valid conclusion but still it gives an idea of the importance of the SMEs in Philippines economy. SMEs contribution to employment in terms of headcounts shows maximum number of employees in the year 2011 with 3872406 head counts in SMEs. This means that in percentage terms in 2011 SMEs employed 61.02% of the total employed labour force. However, the highest rate of employment in percentage terms by SMEs



Table 9: Philippines SMEs relevant data

Data Name	Formula	Unit	2007	2008	2009	2010	2011
GDP Real Growth Rate		%	7.3	3.8	1.1	7.3	3.7
SME Contribution to Export (%)	Value of Export by SMEs as % of Total Export	%	na	na	25% of the country's total exports revenue	na	na
SME Contribution to Employment (Value)	No. of employment in SMEs	No. of Headcounts	33,55,742	33,95,505	35,95,641	35,32,935	38,72,406
SME Contribution to Employment (%)	No. of employment in SMEs as % of total employment	%	64.69	61.24	63.19	62.32	61.02

Source: <http://www.asean.org/images/archive/SME/sme%20basic%20information%20-%20philippines.xls>

was in the year 2007 with a contribution of 64.69%.

Singapore

Singapore is one of the important countries within the ASEAN-6 group. The real GDP growth rate of Singapore was highest in 2010 i.e. 14.8% while in the immediate preceding year it was negative. Singapore has reached to such a position from 7.4% GDP growth rate in 2005 to 14.8% GDP growth rate in 2010. The SMEs real value growth rate was highest in the year 2009 with a figure of 14.4% but it had declined in 2010 to reach to 6%. In terms of real value addition by SMEs based on 2005 prices it was highest in the year 2010 with a figure of 139.2 billion SGD. The CAGR if calculated comes out to be 5.8%.

SMEs in Singapore have always contributed more than 50% to the total enterprises value addition in the economy. This shows the increasingly important role of SMEs in Singapore economy. Value added contributed is calculated by SMEs contribution by value to total value added of enterprises based on current market prices. The highest percentage of SMEs contribution was in the year 2009 with 58% contribution towards Singapore economy. In terms of employment generation, SMEs in Singapore have consistently contributed every year, the highest contribution being in the year 2009 and 2010 with employment of around 2 million workers. The percentage contribution of Singapore SMEs towards employment remained 70% all years except 2005 when it was marginally more i.e. 71%.

Thailand

Thailand's GDP growth rate in 2010 was 7.8% which shows the strong position of the economy in the ASEAN region. In immediate previous year i.e. in 2009 it was negative which shows that Thailand's policy makers have taken strong decisions that have boosted the GDP growth rate. Interestingly, the SME growth rate in Thailand was more than GDP growth rate in the years 2006 and 2010 with figures of 5.3% and 7.9%, respectively.

In value terms, SMEs contribution to GDP was highest in the year 2010 with a figure of 3746967 CY. The CAGR of SME contribution by value comes out to be 5.27%. In percentage terms, SME contribution to GDP was highest in the year 2006 when it was 38.9% and has fallen to 37.1% in the year 2010. SMEs contribution towards exports is also imperative for economic growth in the economy. SME contribution to exports in Thailand was highest in the year 2010 when it was 1753804.3 CY from the previous figure of 1452479 CY in 2006. The CAGR comes out to be 4.83% in case of contribution to exports. SME contribution to export in percentage was 29.5% in 2006, and then increased to 30.1% in 2007. After that it again declined to 28.9% in 2008, with marginal increase in 2009 to 30.9 % (when it was highest) to eventually reach to 28.4% in 2010. In order to contribute towards overall economic growth, SMEs are also contributing in employment process in the Thailand economy. In 2010, SMEs were employing 10507507 employees which have increased substantially from



Table 10: Singapore SMEs relevant data

Data Name	Formula	Unit	2005	2006	2007	2008	2009	2010
Real GDP growth rate		%	7.4	8.8	8.9	1.7	-1.0	14.8
SMEs' real VA growth rate		%	11.3	7.8	11.2	-8.9	14.4	6.0
SMEs' VA (real terms)	VA (based on 2005 prices) contributed by SMEs	SGD	105.0 bil	113.2 bil	125.9 bil	114.7 bil	131.2 bil	139.2 bil
SMEs' Contribution to Total Enterprises' VA	VA contributed by SMEs to total VA of enterprises (based on current market prices)	%	54	54	56	50	58	54
SMEs' Employment	No. of employment in SMEs	No. of Headcounts	1.5 mil	1.6 mil	1.8 mil	1.9 mil	2.0 mil	2.0 mil
SMEs' Contribution to Total Enterprises' Employment	No. of employment to total employment of enterprises	%	71	70	70	70	70	70

Source: <http://www.asean.org/images/archive/SME/sme%20basic%20information-%20singapore.xls>

Table 11: Thailand SMEs relevant data

Data Name	Formula	Unit	2006	2007	2008	2009	2010
GDP Growth Rate		%	5.1	4.9	2.5	(2.2)	7.8
SME Growth Rate		%	5.3	4.8	2.0	(2.4)	7.9
SME Contribution to GDP(Value)	GDP Value Contributed by SMEs	Value in Currency	30,50,565.1	32,98,529.4	34,57,685.3	34,17,860.7	37,46,967.0
SME Contribution to GDP(%)	GDP Value Contributed by SMEs % to Total GDP	%	38.9	38.7	38.1	37.8	37.1
SME Contribution to Export (Value)	Value Of Export Contributed by SMEs	Value in Currency	14,52,479.0	15,79,971.6	16,91,144.5	15,89,199.8	17,53,804.3
SME Contribution to Export (%)	Value of Export by SMEs as % of Total Export	%	29.5	30.1	28.9	30.9	28.4
SME Contribution to Employment (Value)	No. of employment in SMEs	No.of Headcounts	86,37,126.0	89,00,567.0	na	97,01,354.0	105,07,507.0
SME Contribution to Employment (%)	No. of Employment in SMEs as % of total employment	%	76.5	76.0	na	78.2	77.9

Source: <http://www.asean.org/images/archive/SME/SME%20Basic%20Information%20-%20-%20Thailand.xls>



8637126 in 2006. Percentage wise the contribution to employment by SMEs was highest in the year 2009 with rate of 78.2%.

Conclusion

In the end it would be justified to conclude that small and medium enterprises are an integral part of ASEAN in general and of ASEAN-6 in particular. With respect to contribution to overall economic growth, ASEAN-6 economies are contributing substantially towards employment, exports and Gross Domestic Product. Thus, SMEs of ASEAN-6 are contributing to the overall economic growth of ASEAN as a region. In addition to this, SMEs in ASEAN represents more than 90% of the total businesses. In order to facilitate the growth of ASEAN, developments of SMEs are very important. Thus, the future policy must necessarily address the impact on the contribution of SMEs towards economic growth of the region.

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Catalyzing Small Business Growth: The Five Step Way

Raj K Shankar

Abstract

There are millions of micro, small and medium enterprises (MSME) in India. Their population is increasing with wide spread entrepreneurship. While it is a positive trend for the sector, MSMEs breaking out of the pack and becoming large enterprises is extremely rare. With India exploding into an opportunity bonanza for entrepreneurial individuals, our high potential MSMEs have tremendous scope to not just thrive but break out full throttle. Lack of a clear and well-crafted strategy is one reason for its non-occurrence. Much of strategic thinking literature also remains out of bounds for the typical Indian MSME. Using academic literature and author's experience with the sector, this paper provides a simple five-step approach to strategy formulation. This approach can enable MSMEs set the right aspirations, make the right design choices, and recreate their enterprises for scale.

Key Words

Strategy and Small Business, Strategic Thinking, Small Business Strategy Formulation, Indian MSME

Introduction

India has a large and vibrant Micro, Small and Medium Enterprises (MSME) sector. With over 45 million units in operation, providing jobs to about 100 million people and contributing about 7% to the nation's Gross Domestic Product (GDP), the sector cannot be ignored (MSME, 2015). With entrepreneurship growing leaps and bounds across the nation this number is just on the verge of explosion. While the sector is growing at a healthy rate, the number of MSMEs growing out of the sector remains small and insignificant. The author's decade long association with entrepreneurs and small businesses suggests that 'lack of a clear strategy' is a dominant reason for this 'lack of growth'. If you are an MSME owner reading this article, ask yourself the following: Can your business be bigger than what it is today? Do you think you have potential to be a large enterprise? Are you and your team working hard everyday to overcome internal constraints?

If the answer to all the above questions is 'yes', then why is your company not growing? How long have you been a MSME? Don't you deserve to rise out the MSME category and become a large, world-renowned business?

The author's strategy consulting experi-

ence shows that small business in India neither has the hard resources (money, infrastructure, etc) nor the soft resources (intellectual property, talent) to utilize traditional strategic management tools and frameworks for growth. Strategy is also largely misunderstood by MSMEs, which makes most MSMEs not use its strength in catalyzing growth. This five step approach to strategy formulation is one solution to this challenge. It is based on global academic literature and local adaptation experience from author's strategy consulting practice in India.

The paper is structured as follows. It briefly discusses what growth is and some commonly used methods for growth. It demystifies what strategy is, what it is not, how it is different from planning and why it is important for growth. The four steps to strategy formulation are discussed in detail. The paper concludes by identifying the benefits and drawbacks of using this strategy formulation approach. It is hoped that this paper will incite owners of MSME units in India to create strategy, experience growth and increase the pool of large enterprises in this country.

Growth Dimensions

Growth is one of the most fascinating concepts. Who does not want to grow? At times it looks like growth is inevitable. What will happen to us if we don't grow? Obsolescence and redundancy are the words the come to mind. The ideas are the same when it comes to businesses too. It is every entrepreneur's dream to create a society altering enterprise. Which entrepreneur at the point of start does not want to become the next Google, Apple, Infosys or Reliance? The reality is that most of these entrepre-

neurs don't share the same views a decade into the enterprise. They resign to make their businesses a lifestyle choice. Their enterprises lack the spirit and energy that their startups once had. Where did all the ambitions and inspiration go?

Based on close engagement with number of small business owners in India, the author believes strongly that this diminishing ambition is due to a lack of strategic thinking. The strong action-orientation of small business owners and loud bias towards operations / action propagated by scholars has resulted in stunted businesses which had (still have) potential to scale and turn big. The solution is to rediscover the power of strategic thinking, learn its method and put it to disciplined practice. This paper describes one way of practicing this.

Before getting into the method it is important to clarify what growth is for the enterprise. Growth for an enterprise could be thought of in number of ways: sales revenue, profits, number of employees, social impact, and number of consumers amongst others. In recent times growth is also being speculated to be: number of visitors to a website, gross merchandise value, number of eyeballs captured, time spent on a website or app, etc. Without any value judgments and futuristic pronouncements, one thing to learn from all this noise is that 'defining what growth means for your business is important'. If you as the owner / leader of your enterprise do not define growth, it becomes difficult to plan how to achieve it. Many instances from practice indicate that businesses do not have clear definitions of what growth means to them. A well-defined goal or an aligned list of goals is the product of



defining growth. It is also important to ask if this is the right set of goals for the enterprise. While in most MSMEs the owner is the only one thinking about growth, it is important to also seek inputs from senior employees and wise advisors if the set goals are fair and aspirational.

Resilience and Resolve

When any small business intends to grow, they seek out managers of large firms or business school faculty or chartered accountants or consultants for advice. All so-called advisors make similar recommendations. This is due to the large similarity in their education and sources of information that they all tap into. A good summary of the most commonly offered solutions to growth strategies are: market penetration, geographical expansion, new product or new market scoping, vertical integration, disruptive innovation, diversification, strategic alliances, mergers and acquisitions, turnaround management, amongst others (Ghosh, 2010). The problem is not really with the solutions offered but with their adaption to the small business context. Small businesses are not structured and are not ready to leverage some of these powerful methods of growth. Hence it is important to search for a more local, usable and small business friendly approach to strategizing for growth.

Identifying Strategy

Strategy is one among many loosely used words in business. Even finding a route to reach office in a trafficked city like Delhi or Bangalore seems to evoke the question - 'What is your strategy to reach office early today?'. The Indian

Premier League (IPL) introduced the 'strategic time-out' in its famous 'T-20' cricket tournaments. With its context neutral use, it is not surprising that business owners do not understand what 'strategy' really means for business. While it is important to acknowledge that 'strategic' does not mean 'important', it definitely does not mean operational effectiveness, a vision, a plan, optimization of a status, or best practice (Porter, 1996; Lafley & Martin, 2013). So, what then is strategy for a business / enterprise?

Tradeoffs and Strategy

Strategy has its conceptual roots in military literature. Its move into business management is relatively recent with a predominant part of its early history devoted to general management (Kiechel, 2010). Though Drucker (1964) seems to have been one of the early proponents of seeing its importance, it was undoubtedly Michael Porter (1980) who brought it out of the shadows of management and gave it a place for itself. There has been a phenomenal growth in strategic management literature since then. While Porter and his intellectual followers claim competition as an integral part of strategy, the arrival of a rival school (making competition irrelevant) pioneered by Kim and Mauborgne (2015) seems to only make the field of strategy richer. Porter seems to have been fairly misunderstood even after him providing clarifications. Irrespective of which school one belongs to, the subject of strategy owes him gratitude.

Irrespective of which school of strategy making one belongs to, it is certain that strategy must have something unique

that merits so much interest from practitioners. In a nutshell, strategy is about choices, choices on a plethora of important aspects that make up your enterprise (including but not limited to): your value proposition, your customer segments/markets, your products/services, your business models, etc. A clear indication of making choices is making trade-offs. Hence a quick question to ask yourself to know if you and your company truly have a strategy is to ask: How am I making my resource allocation? Is there a trade-off being made?

Need for Strategy

One of the most important reasons small businesses need a strategy is to make good resource allocation decisions. Most small businesses are resource constrained. This makes it all the important that they spend effort on strategy formulation. Since strategy is about making choices, it often forces the owners to think through and come up with an aligned set of choices. This is what brings efficiency and effectiveness to resource utilization. Without right resource allocation, it is difficult for organizations to scale. It results in precious resources being squandered away ignorantly.

Most companies don't make trade-offs. This results in poor resource allocation. This in turn results in less than stellar growth. All of this also reduces makes the owner / entrepreneur blame the external factors more than they deserve. Eventually many small businesses remain small businesses forever not by choice but by force.

Turning Dreams to Action

Strategy is about making choices, not plans. It requires a lot of deep thinking, which is hard intellectual exercise. The analogy that can quickly detail this confusion is that of building a home. When you want to build a home, you first go to an architect and share your dream. This is turned into a model that can help the masons and engineers to turn your dream into a reality. The trouble arises when we share the dream to the masons and engineers directly. Most often you will end up with a home that is very different from the one you dreamt about. You then live in a home that you never dreamt and maintain it because changing is more difficult than building and at times impossible.

This is one of the reasons why it is so poorly practiced in enterprises. Many large enterprises also fall prey to this misunderstanding. Strategic thinking results in a strategy, which can then be planned for resource allocation and execution. Most companies do planning, which involves extrapolating past budgets into the future or making cosmetic changes to verbiage and form. All of this does not result in strategy (Mintzberg, 1994). In today's fast changing world, organizations of all sizes need strategy. Small business needs it all the more as it has greater opportunity to change and grow.

Five steps to creating strategy

Step 1: *Where do we want to be three years from now?*

Aspire. Without aspiration there is no



future. But how should one aspire. Small businesses must not aspire based on resources controlled. They must aspire based on their strengths, value proposition, and opportunities. The aspirations must be specific. The goals must also be aligned to your mission or your purpose for existence.

Turn the aspiration into short, simple, visualizable statements for your employees and stakeholders. Paint a picture of how the consumers' world will be if the value is delivered. The statements can be from the most abstract to the most specific. While it is best to strike middle ground, choose the one that strikes a chord in your heart (or the heart of your organization).

Define the aspiration in a way that it will be easy for every one in the organization to know when it has been achieved. There is nothing like having a specific and focused goal driving your actions.

Example: A small outsourcing company in Indore kept taking projects coming its way during the first year of operations. When the company was about 18 months of age we did this goal setting exercise and found that more than 50% of the projects should not have been taken at all. The project portfolio was diverse and very far away from making the company become a reliable service provider for cloud-based services. While taking on work was natural to generate revenues, not taking the right projects ended up underutilizing the strengths and resources of the company. Stopping and setting clear, specific goals helped getting off the wrong projects. It was tough in the short term, but it readied

the company for scale. Today the company (in its third year of operation) has already reached over ten times its initial revenues.

Step 2: Where are we today?

Do an honest current state assessment of the organization. This must involve assessment of resources, capabilities, markets currently serviced, value created and delivered, organizational strengths and weakness, external threats and opportunities. This is probably most difficult to do as it may reveal what no owner wants to see or know. But it is in the best interests of the business to do this exercise in an objective manner. When you conduct the self-assessment exercise, be honest with yourself. Also be knowledgeable about what assets are for your business. Treat your business apart from you while doing this assessment.

Example: A production firm engaged in contract manufacturing decided to begin making its own products. While the company had seen some of the best designs and turned them into products, an objective current state study showed that the company's strengths were in: efficiency, production process, tight execution, built loyal shop floor labour force, etc. But to become a product company (aspiration) it needed a design capability, opportunity evaluation capability, marketing and branding capability, marketing team, sales force, managers for planning and oversight, collection skills, etc. A detailed current state assessment helped the firm explore options, muster the adequate resources and put in place a strategy for achieving its aspirations. It also helped it decide how much of contract

manufacturing to pursue and how.

Step 3: *Identify the gap*

The first two steps provide the start and end points of a journey that you and your enterprise wish to take. A predominant part of the small businesses in India do not possess this. Hence strategizing is not possible. But once you get done with the first two steps, the third step helps you get into a creative brainstorming on possible routes between the two points. At this stage of the thinking exercise one must not engage in evaluation as it reduces the possibility of coming up with creative insights or seemingly invisible routes.

Clearly identify the magnanimity of the gap. The gap needs to be measured in terms of:

- i) Opportunity: What is the difference between what is being served and what it would like to serve?
- ii) Resources: How much resources (money, infrastructure, etc) are needed to achieve the aspired goal?
- iii) Capabilities: What capabilities (talent, skills, systems, etc) need to be built or acquired to achieve the desired goals?

Example: An aspiring advertising agency (ad agency) remained a design and printing house for the first couple of years. The owners' aspiration to become a full-fledged ad agency remained a dream. Though they worked hard it remained elusive. Conducting the current state

assessment helped the owner identify the gap between the current reality and future aspiration. To become an agency that prestigious clients would engage requires two key capabilities, which the company did not have - content creation skills and account management skills. Identifying and defining the gap helped the owner chart out possible options to build the capacities inside the firm.

Step 4: *Create options for growth*

Identify the possible ways in which this gap can be filled. This requires you and your team to sit and make decisions on the possible paths. Every path is an option to move from point A (where we are today) to point B (where we want to be). Every path requires the business to decide which customer group to go after, which channels to use, which resources and capabilities to build and use, what level of risk it entails, what are the possible rewards and does it require building new resources and capabilities or extend existing resources and capabilities. Based on the above assessment a bunch of possible options or paths are arrived at. During this exercise the company must not rely only on analytical information, but also explore creative ways to fill the gap. Allow yourself to be surprised by the number of creative growth paths offered by your employees and external individuals.

Example: A green waste management company, which makes products for composting, decided to look at ways of growth. While the aspiration was to become a large national player, the immediate 3-5 year goals were reduced to achieving a ton of waste reduction



every day through the use of its products. To achieve this there were number of paths: continue to sell individual products through direct selling, sell an improved solution to organizations, sell products through distributorships or franchisees, or develop an internal sales organization to drive sales. One innovative path that came up through brainstorming was to use evangelists to promote the cause and use marketing to attract buyers. Turning the sales process on its head made the company stand different and gain recognition. It has since quintupled its revenues in 12 months and is close to achieving its goal ahead of plan.

Step 5: Choosing the most suitable option

Step five involves making the choice. Every option or path has pros and cons, its inherent benefits and costs. Choosing a route means giving up on all other routes. This is the most difficult step as letting go is not easy for any owner / manager. All of us want to have the cake and eat it too. The worst manifestation of this tendency is by combing two or more routes in the hope that one will receive the best of both worlds. Most of the time it is the opposite that happens.

While it may be easy to suggest that every route be analyzed for costs and benefits and the best choice made, it is a route to disaster or at best mediocrity. There is an element of tacit knowledge that exists within every business owner. Making the strategy process completely analytical and algorithm like is disrespecting this rich knowledge base sitting inside every human being.

So, how does one make the choice? While there are no rules here, one good way to make this choice is to base it on two factors: (i) business purpose and (ii) personal aspiration. The step has some subjectivity associated with it. Basing it on the two factors ensures that there is alignment in the path chosen to living the enterprise mission. The second factor makes it look a bit selfish, but it is not since there is a reason why the enterprise was setup in the first place. Hence meeting the personal aspiration is equally important in making the choice of path to take. It has to be done with a lot of conviction. Once made it is the small business owner's responsibility to breathe life into it and muster support from the entire organization to turn it into reality.

Example: An intension-embedded jeweler evaluated options for growth. Her love for creating personalized jewellery and embedding them with right intentions for the buyer got her to begin the business. To achieve growth she had become more like a traditional jeweler and lost track of her business purpose. Her business was fat (large inventory) and unhealthy (no cash profits). Her paths included gem based jewellery, create a line for specific narrow markets, retail them through online stores, retail them through jewelers, or engage in consulting to customize ornaments. Choosing the last one was because of the two reasons cited above, namely business purpose and personal aspiration. By making consulting based customized jewellery the entrepreneur was able to move into the niche luxury segment where she could focus on being the designer she had always wanted to be. Choosing this

path also enabled her find a model that fit into her company's original mission. This helped her employees who had joined her feel more confident and committed.

Turning the Strategy into a Plan

The five-steps will enable asking and answering right questions. The result will be a set of choices aligned to the purpose and the goal. To make sure the strategy is implemented, the strategy has to be turned into plans at all levels and all functions of the organization. When the strategy is turned into a plan, every individual in the small business will know clearly what is his or her individual contribution to the business. The plan must have the goals, sub-goals, action items, milestones, responsibilities and review frequency. This has to be shared with all involved in the organization. Creation of this document and sharing it with all is key to successful execution of the strategy.

Review and Course Correction

If there is one activity that can make or break the realization of a well-crafted strategy, it is review. Reviews are a periodic activity to look at what was intended and what was achieved. The gaps identified need to be plugged at the earliest. Reviews while catching lapses early, also provide insights into trends. Using these insights, minor course corrections can be made possible. At times too much of a good thing is also a bad thing, if not caught early. It is not unusual to see a fast growing business fail suddenly. While the reasons for failure could be many, the lack of serious reviews only catalyzed it.

Strategy as a Boon

The benefits of a clearly defined strategy are:

- a) Growth: A clearly defined strategy enables achievement of intended growth. This growth is healthy as we create the organization we want to see.
- b) Focus: The clearly spelled-out strategy helps in saying 'no' to distracters however appealing they are. This helps increase momentum.
- c) Efficient and effective resource allocation
 - a. Release unused / underused resources: More than unused resources, it is underused resources that will be released into the system by putting a strategy in place.
 - b. Allocate adequate resources to better opportunities: When resources are unstuck, they provide the needed power to organizations to allocate it to right projects.
- d) Improved margins: Due to greater efficiency and effectiveness, margins are bound to increase. Increased margins give the organization greater power by increasing resource base.

Two Obstacles

- **Lack of an 'A Team'**: If you as the owner/entrepreneur and find yourself not having anyone to share



strategic thinking in your business, know instantly that you have a leadership crisis. Seek a good mentor to know your strengths and weakness and how you can form a good leadership team. One of the biggest reasons for small businesses to not grow in India is the lack of a leadership team popularly called 'the A Team'.

- **Lack of entrepreneurial mindset:** A big challenge that small businesses face is the entrepreneur's lack of an entrepreneurial mindset. If the entrepreneur is not able to let go of past success and continue experimentation into the future, it is very difficult to engage in strategy making or in its execution.

Conclusion

Small businesses aspire to grow. But for want of a strategy all their hard work goes in vain. The reason for lack of strategizing is both the confusion over its meaning and the ignorance on its process. Most of the literature in strategy addresses strategy formulation and execution needs of large enterprises. But at its core, strategy is about making a set of aligned choices. This article is an attempt to bring strategic thinking to small business. Its simplicity is its strength. The five-step process is one possible way to answer key questions, which can help leaders of small businesses make those choices and create strategy. Without a carefully designed and well crafted strategy it will be difficult for the millions of small businesses in India to break out of their pack.

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Efficiency Measurement of Indian Sugar Manufacturing Firms - A DEA Approach

Abstract

Data Envelopment analysis (DEA) has been used to calculate the technical and scale efficiency measures of the public and private sugar manufacturing firms of the Indian Sugar Industry (2006 to 2010). Within DEA framework, the input & Output oriented Variable Returns to Scale (VRS) & Constant Return to Scale (CRS) model is employed for the study of Decision making units (DMUs). A representative sample of 43 firms which account for major portion of the total market share is studied. The selection criterion for the inclusion of a firm in the analysis was the total sales of INR 5,000 million or more in the year 2010. After reviewing the literature it is found that no study has been conducted in the context of Indian sugar manufacturing firms in the Postliberalization era which motivates us to initiate the study.

Key Words

Technical Efficiency, Indian Sugar Manufacturing Units, DEA, Input /Output oriented.

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Introduction

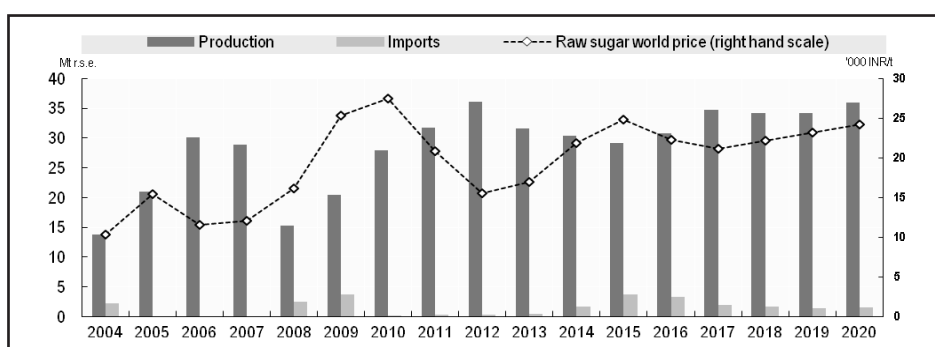
Sugar Industry was part of structured Industrial Development Policy in the five year plans, introduced in 1951 and has always been under the direct control of the Government ever since. It is highly politicized and closely controlled by authorities set by the Governments (State & Central). The authorities control the minimum prices for sugar canes as well as rate of sugar both as commercial and domestic uses. They also control the licensing of sugar manufacturing business and Imports and exports.

The country has dual sugar pricing policy. It is a peculiar situation where raw material price is fixed by the Government which goes up every year. Sugar price for the levy sugar (40% of production) is fixed without taking into consideration of all factors that go into production i.e. 40% of the sugar is sold below cost of production. Thus Government, for all its valid reasons, has protected the farmer and the household consumer who gets levy sugar. The quantity is determined based on historical data of past plus to keep the prices under check - who uses this sugar. 80% of free sale is used by Institutional users who are free to charge on their product.



Besides the controls on sales, are such that mills are forced to sell its product fortnightly basis due to fear of the quantity short-sold getting converted into levy. The advantage is taken by the trade i.e. the retailer. A retailer adjusts the price upwards when the mill rate goes up but does not drop when mill is forced to sell at lower price.

Figure 1: A Projection of India's sugar production, consumption and imports



Source : OECD and FAO Secretariats.

As per OECD-FAO (Agricultural Outlook 2011-2020), "India, the second largest global producer and the world's leading consumer, is expected to boost production substantially to 32 Mt of sugar per year, on average, in the coming decade, or some 50% higher than in 2008-10, when production fell sharply. Annual sugar output will continue to be subject to periodic large swings in response to the longstanding production cycle. Some other countries of Asia, such as China and Pakistan, are also expected to continue to experience milder forms of production cycles, which contribute to fluctuations in production and their import volumes. Outside this group, an expansion drive underway in Thailand is expected to continue as investment projects currently in the pipeline come on stream, lifting production to around 8.7 Mt by 2020-21, and maintaining its position as the world's third largest producer".

**Table 1: Sugar production, supply, and distribution of sugar in India
(1,000 metric tons, raw value)**

Year	Production	Imports	Total Supply	Exports	Domestic Consumption
2008-09	15,950	1,358	29,604	224	23,500
2009-10	20,637	2,431	28,429	225	23,000
2010-11	26,650	405	32,259	3,200	23,000
2011-12	28,300	0	34,359	2,500	25,000

Source: USDA, Foreign Agriculture Service, PSD online <http://www.fas.usda.gov/psdonline/psdHome.aspx>.

The sector also has a significant standing in the global sugar space as Indian domestic sugar market itself is one of the largest markets in the world, in volume terms. The country is also the second largest sugar producing geography and remains a key growth driver for world sugar, growing above the Asian and world consumption growth average.

Indian Sugar Mills Association (ISMA) which is the body of Sugar Producers of India declared that around 16.59 million tons of sugar has been produced till February which is almost 2.70% higher than the same period last year's production. According to ISMA, the recovery rate is 9.8% which is a significant across the globe. The sugar cane growers' data suggest that the country the world's second-largest sugar producer and biggest consumer may produce around 24.5 million tonne in year 2012-13. India typically needs around 21.5 million to 22 million tonne for annual consumption, which means the country will still have surplus stocks to export for a third year in a row in 2012-13 and prices may subside for another year.

Research Methodology

For last few decades firms are interested to evaluate their performances over their competitors in terms of 'efficiency'. According to Farrell (1957) efficiency can be decomposed into two parts, Technical Efficiency (TE) and Allocative Efficiency (AE). TE considers attaining the maximal output of a Decision Making Units (DMU) given a set of inputs whereas AE considers optimal allocations of inputs given the set of prices of

the products. Total Economic Efficiency can be computed from these two efficiency measures. Efficiency can be viewed from input and output orientation.

Suppose a firm operates on two inputs (X_1 and X_2) to produce a single output Y . So the production function can be given as below

$$Y = f(X_1, X_2)$$

This equation can be rewritten as follows

$$1 = f(X_1/Y, X_2/Y)$$

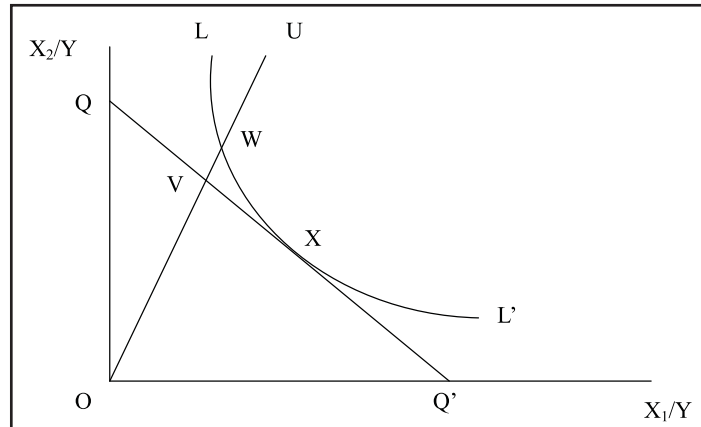
(Assuming constant returns to scale)

In input oriented measure the basic principle is to reduce inputs without changing the amount of output. In the following figure LL' is the efficient unit isoquant with a given level of input level OU.

Suppose a firm operates at U level of input and W is an efficient point as it lies on the efficient unit isoquant. UW level of input can be reduced without reducing the amount of output. This amount is the measurement of inefficiency. The amount of efficiency must be one minus the level of inefficiency. So from the diagram Technical Efficiency can be measured by the ratio of OW/OU which is one minus the level of inefficiency. If input prices are known that is shown by the line QQ' a firm can reduce its production cost by the amount of WV such that it can operate on X which is efficient both technically and allocatively rather than W which is only technically efficient. So Allocative Efficiency is given by the ratio OV/OW.



Figure 2: Efficient unit isoquant with a given level of Input Level

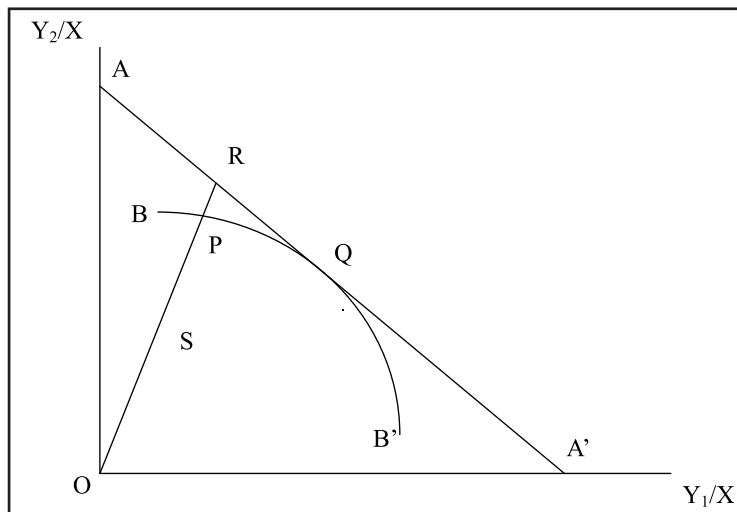


Total Economic Efficiency can be given by $E = OV/OU = OV/OW * OW/OU =$ Technical Efficiency * Allocative Efficiency.....(i)

As all efficiency measures are ratio they range between zero and one. In output oriented measure expansion of output

without changing the level of inputs was evaluated (Hua, Z. & Bian, Y., 2008). It is assumed that firm produces two outputs (Y1 and Y2) using one input (X). In the following figure BB' is the production possibility curve where each and every firm is technically efficient.

Figure 3: Production Possibility Curve



Suppose a firm operates at point S which is an inefficient condition as it lies below the production frontier. So SP is the level of technical inefficiency and efficiency can be derived by one minus level of inefficiency. So Technical Efficiency is given by the ratio OS/OP. If it is incorporate price information which is represented by the isoprofit curve AA' Allocative Efficiency is given by OP/OR.

Total Economic Efficiency is given by $E = OS/OR = OS/OP * OP/OR = \text{Technical Efficiency} * \text{Allocative Efficiency}$.
.....(ii)

The input and output oriented measures of efficiency are same under the assumption of constant returns to scale and differ when increasing and decreasing returns to scale exist (Fare and Lovell, 1978).

Farrell's (1957) frontier function technique is limited in the sense of constant returns to scale and non parametric nature. Later these assumptions are relaxed. Efficiency estimation technique can be divided into two categories.

- (1) Econometric techniques
- (2) Mathematical programming techniques

Econometric Techniques

These methods involve estimation of production function (primal) or cost or profit function (dual) to derive the frontier. There are two types of frontiers, deterministic and stochastic. Ordinary Least Square technique is used to estimate the deterministic frontier. The major drawback of this method is that it

does not capture the possible effects of the uncontrollable factors of the producer which results an overestimation of efficiency (Meeusen and van den Broeck, 1977).

Stochastic frontier model carefully handles this problem. Maximum likelihood methods estimate stochastic frontier model which comprises an error term that incorporates the possible effects of uncontrollable factors of the producer. But this methodology needs specific functional form to estimate efficiency and is limited with respect to the distributional assumptions of the error term.

Mathematical Programming Techniques

Farrell's non parametric piecewise convex isoquant is recognized as mathematical programming technique. His work was strengthened by Charnes, Cooper and Rhodes (1978), Fare, Grosskopf and Lovell (1983), Banker, Charnes and Cooper (1984), and Byrens, Fare and Grosskopf (1984), Pannu, H.S. This approach is widely known as Data Envelopment Analysis (DEA). The major advantage of DEA is that it does not demand any specification about the functional form or does not assume any distributional form of the error term. DEA works smoothly under the assumption of VRS.

Analytical Model

Data Envelopment Analysis (DEA) is a non parametric mathematical programming to estimate the frontier function. DEA provides the efficiency of different firms operating on same input output variable. We illustrate DEA



method from both input and output orientation. Let us consider P number of DMU producing Q number of outputs using R number of inputs. Inputs are denoted as X_{ip} ($i = 1, 2, \dots, R$) and outputs are denoted as Y_{jp} ($j = 1, 2, \dots, Q$) for each farm p ($p = 1, 2, \dots, P$).

It was liked to find out the efficiency for each farm and hence its better to get a ratio of all outputs over all inputs. So we are interested to find out the ratio of

$\frac{\sum_{j=1}^Q u_j y_{jp}}{\sum_{i=1}^R v_i x_{ip}}$, where Y_{jp} is the quantity of j th output produced by P^{th} farm, X_{ip} is the quantity of i^{th} input used by P^{th} farm, u_j and v_i are the output and input weights respectively.

So efficiency can be represented as

$$TE_p = \frac{\sum_{j=1}^Q u_j y_{jp}}{\sum_{i=1}^R v_i x_{ip}}$$

(Coelli, 1998; Worthington, 1999).

DMU are interested to maximize their efficiency where efficiency must be less than one which plays the role of constraint.

The optimization problem becomes

$$\text{Max } TE_p$$

$$\text{subject to } \frac{\sum_{j=1}^Q u_j y_{jp}}{\sum_{i=1}^R v_i x_{ip}} \leq 1 \dots \dots \dots (a)$$

where u_j and $v_i \geq 0$.

The constraint restricts the efficiency less than one and confirms that weights are positive. The weights are chosen in such

a way that efficiency will be maximized. From an output oriented viewpoint the mathematical programming can be formulated as below (Coelli, 1998; Worthington, 1999; Shiu, 2002)

$$\text{Max } TE_p$$

$$\text{subject to } \sum_{j=1}^Q u_j y_{jp} - x_{ip} + w \leq 0$$

$$p = 1, 2, \dots, P \dots \dots \dots (b)$$

$$v_i x_{ip} - \sum_{i=1}^R u_i x_{ip}$$

$$u_j \text{ and } v_i \geq 0.$$

From input orientation method the mathematical programming can be formulated as follows (Banker and Thrall, 1992; Coelli, 1998; Worthington, 1999; Shiu, 2002; Topuz et al, 2005).

$$\text{Min } TE_p$$

$$\text{subject to } \sum_{j=1}^Q u_j y_{jp} - y_{jp} + w \geq 0$$

$$p = 1, 2, \dots, P \dots \dots \dots (c)$$

$$x_{ip} - \sum_{i=1}^R u_i x_{ip} \geq 0$$

$$\text{and } u_j \text{ and } v_i \geq 0.$$

If $w = 0$ then the above model follows CRS and if w is unconstrained then it follows VRS. We get technical efficiency in the first case and pure technical efficiency in the second case.

Selection of Inputs and Outputs

DEA approach can be applied to revenue producing DMUs. This can be done by converting the financial performance measures to the DMU's technical efficiency equivalents. While using input and output variables, the methodology of Feroz et. al. (2003) and Wang (2006) was followed, who have converted the financial performance measures to the firm's technical efficiency equivalent using DuPont Model². This process of measuring financial performance indicators can be converted into output and input variables. Where, sales revenue and Profit after Tax (PAT) can be used as output variable while cost of goods sold (COGS), selling and Administration expenses, and total assets as input variables. The indicators are defined as follows:

1. Input (X_1): Total Cost of Goods Sold (COGS)
2. Input (X_2): Total Selling and Administration Expenses (or Cost)
3. Input (X_3): Total Assets hold by firm during the year
4. Output (Y_1): Total Sales of the Firm during the Year
5. Output (Y_2): Total Profit after Tax (PAT) of the Firm during the Financial Year.

The above methodology helps to logically convert performance ratios into efficiency. In this way long term resources total assets and short term resources cost of goods sold and selling

and Administration expenses are used to produce output in the form of sales revenue and PAT.

Selection of Data

A representative sample of 43 firms which have account for major portion of the total market share is studied considering the imitates of DEA only those firms are included in analysis which have their equity in positive and their annual reports were available for all the five years from 2006 to 2010. The selection criterion for the inclusion of a firm in the analysis has been total sales of INR 500 crores or more. Data for the study is obtained from secondary sources (www.capitaline.com) in the form of annual reports of the steel firms for the period 2006 to 2010.

Results and Discussions

We have analyzed the efficiency for different DMUs from both input and output oriented measures. In input oriented measures DMUs operate on same isoquant and in output oriented measures DMUs operate on same PPF. The objective is to attain maximum efficiency given the constraints. Detail mathematical formulation is given in Research Methodology section. Input and output oriented measures can be calculated for CRS as well as VRS. So we have four different combinations of efficiency measures;

1. Input oriented CRS: Operate at the best point of isoquant under CRS
2. Input oriented VRS: Operate at the best point of isoquant under VRS



3. Output oriented CRS: Operate at the best point of PPF under CRS
4. Output oriented VRS: Operate at the best point of PPF under VRS

We have implemented our model in Data Envelopment Analysis software and compare the mean of efficiency from different measures. We have presented our two outputs and three inputs efficiency for different DMUs in table. Data of five year period of 43 sugar firms are taken for this study.

We calculate the efficiency using DEA approach for both constant and variable returns to scale. We consider both input and output oriented measures and present the analysis in the following table. We take 43 sugar manufacturing firms of India and measure the efficiency for a five year period.

We conduct DEA analysis for sugar firms in Indian context. We compute the efficiency for 43 firms from input and output orientation for last five year period.

From input oriented point of view industry average efficiency is 0.2758 and 0.3207 for CRS and VRS respectively. Among 43 firms 15 and 16 firms have efficiency more than the industry average for CRS and VRS respectively from input orientation. From output oriented view 15 firms perform better than the industry average efficiency for both CRS and VRS. Average industry efficiency for CRS is same either from both measures.

In Annexure 2 we provide year wise efficiency of 43 firms for CRS and VRS

from input and output oriented point of view. We got the same results from both the measures. In CRS efficient firms are Bajaj Hindusthan (2006, 2007), Eastern Sugar & Industries Ltd (2006, 2007, 2008, 2009, 2010), Kashipur Sugar Mills Ltd (2010) and Piccadilly Sugar & Allied Industries Ltd (2006, 2010). As per VRS efficient firms are Bajaj Hindusthan (2006, 2007, 2008, 2009), Balrampur Chini (2007), Dalmia Bharat (2010), EID Parry (2009), Sh. Renuka Sugar (2010), Eastern Sugar & Industries Ltd (2006, 2007, 2008, 2009, 2010), Kashipur Sugar Mills Ltd (2010) and Piccadilly Sugar & Allied Industries Ltd (2006, 2010). So Eastern Sugar & Industries Ltd performs better than other DMUs from both input and output oriented measures for last five years.

Summary & Comments

DEA is one of the most popular techniques to assess the efficiency level of DMUs. It is a non parametric method and need not to assume the distributional form of the production possibility curve which gives it a comparative advantage than other modeling techniques. Studying the exhaustive literature we found that DEA is one of the most suitable tools to measure the efficiency of various DMUs and no study has been done in the context of Indian sugar industry in post-liberalization era which motivates us to initiate the study.

Empirical analysis using the panel data of five years (2006-2010) from 43 Indian sugar manufacturing firms demonstrates that Indian firms have achieved, on an average technical efficiency, about 86-90 per cent. From both input and output orientation industry efficiency average in CRS is same while it is different for VRS and showing better efficiency in case of

Table 2: Two Outputs-Three Inputs DEA Efficiency of Indian Sugar Manufacturing Firms (2006-2010)

S. No.	DMUs	Input Oriented		Output Oriented	
		CRS	VRS	CRS	VRS
1.	Bajaj Hindusthan	0.5288	0.9230	0.5288	0.9932
2.	Bairampur Chini Mills	0.0960	0.3888	0.0960	0.7902
3.	Dalmia Bharat	0.0850	0.4640	0.0850	0.7792
4.	Dhampur Sugar	0.0948	0.1018	0.0948	0.4576
5.	EID Parry	0.1280	0.2906	0.128	0.6090
6.	Sakthi Sugars	0.0844	0.0982	0.0844	0.5160
7.	Shree Renuka Sugar	0.1358	0.4584	0.1358	0.6688
8.	Triveni Engineering India	0.1120	0.4714	0.1120	0.8050
9.	Simbhaoli Sugars Ltd.	0.0880	0.0880	0.0880	0.3130
10.	Bannari Amm. Sugar	0.1074	0.1076	0.1074	0.4786
11.	DCM Shriram Inds	0.1478	0.1478	0.1478	0.4564
12.	Dharani Sugars	0.1484	0.1484	0.1484	0.3312
13.	Jeyapore Sugar Co.	0.1368	0.1368	0.1368	0.3296
14.	J.K. Sugar	0.3246	0.3246	0.3246	0.3554
15.	Kesar Enterprise	0.1954	0.1954	0.1954	0.3222
16.	Kothari Sugars	0.1658	0.1658	0.1658	0.3482
17.	Parrys Sugar	0.1952	0.1952	0.1952	0.3570
18.	Ponni Sug.Erode	0.3950	0.3950	0.3950	0.4410
19.	Rajshree Sugars	0.1124	0.1124	0.1124	0.3446
20.	Thiru Aroor Sugar	0.1150	0.1150	0.1150	0.3108

Contd..

Table 2: Two Outputs-Three Inputs DEA Efficiency of Indian Sugar Manufacturing Firms (2006-2010)

S. No.	DMUs	Input Oriented		Output Oriented	
		CRS	VRS	CRS	VRS
21.	Ugar Sugar Works	0.0994	0.0994	0.0994	0.2936
22.	Dwarikesh Sugar Industries Ltd.	0.1302	0.1302	0.1302	0.3182
23.	Eastern Sugar & Industries Ltd.	1	1	1	1
24.	Empee Sugars & Chemicals Ltd.	0.4434	0.4434	0.4434	0.4704
25.	Gayatri Sugars Ltd.	0.4036	0.4036	0.4036	0.4252
26.	Gobind Sugar Mills Ltd.	0.2662	0.2662	0.2662	0.3576
27.	Indian Sucrose Ltd.	0.2836	0.2836	0.2836	0.3626
28.	Kashipur Sugar Mills Ltd.	0.7674	0.7686	0.7674	0.7744
29.	KCP Sugar & Industries Corporation Ltd.	0.1710	0.1710	0.1710	0.3900
30.	K. M. Sugar Mills Ltd.	0.2936	0.2936	0.2936	0.3650
31.	Naraingarh Sugar Mills Ltd.	0.6072	0.6072	0.6072	0.6224
32.	Oswal Overseas Ltd.	0.6764	0.6764	0.6764	0.6786
33.	Oudh Sugar Mills Ltd.	0.0864	0.0864	0.0864	0.3184
34.	Piccadilly Agro Industries Ltd.	0.3120	0.3120	0.3120	0.3800
35.	Prudential Sugar Corporation Ltd.	0.4862	0.4862	0.4862	0.4956
36.	Rana Sugars Ltd.	0.1526	0.1526	0.1526	0.3022
37.	SBEC Sugar Ltd.	0.2358	0.2358	0.2358	0.3356
38.	Shree Chamundeswari Sugars Ltd.	0.1854	0.1854	0.1854	0.3302
39.	United Provinces Sugar Co Ltd.	0.2674	0.2674	0.2674	0.3478

Contd.:

Table 2: Two Outputs-Three Inputs DEA Efficiency of Indian Sugar Manufacturing Firms (2006-2010)

S. No.	DMUs	Input Oriented		Output Oriented	
		CRS	VRS	CRS	VRS
40.	Upper Ganges Sugar & Industries Ltd.	0.0896	0.0896	0.0896	0.2762
41.	Uttam Sugar Mills Ltd.	0.1210	0.1210	0.1210	0.2986
42.	Vishnu Sugar Mills Ltd.	0.5266	0.5266	0.5266	0.5464
43.	Piccadilly Sugar & Allied Inds Ltd.	0.8590	0.8590	0.8590	0.8616
	Mean	0.27582	0.32077	0.27582	0.47808

output orientation.

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Entrepreneurship Development among Tribals in India

Abstract

Entrepreneurship plays an important role in the economic development of a country by taking important inputs from financial, physical, social and infrastructural facilities for progress. Entrepreneurial activity is also important for the development of the tribals who are considered the backward section of the Indian society(Article-342)¹. The present paper focuses upon different studies carried on tribal entrepreneurship and finds important relations between them. The paper, further analyzes the patterns and issues emerging from present literature, identifies the gaps and tries to guide the path for future studies in tribal entrepreneurship.

Key Words

Tribal Entrepreneurship, Existing Literature, Study Gaps, Study Importance

Introduction

The word tribe can be generally understood to mean a group of families bound together by kinship, usually descending from a mythical or legendary ancestor, living in a common region, speaking a common dialect and having a common historical past(Ministry of Social Justice and Empowerment,1999)². According to

Analjyoti Basu

Pankaj Bharti

Madhusudan Trivedi (1991)³ tribals are the early settlers of Indian Union (before Dravidians and the Aryans).They are known for their unique way of life, customs, traditions, beliefs and practice. In the past they were the forest and hill dwellers. Slowly they shifted to agriculture. At that time fertile lands were not left for them, as other communities already have their land holdings. The land availability became scarce. Further fragmentation from generation to generation worsened the position and pushed them towards poverty and backwardness. In this condition more and more tribals left agriculture and accepted wage earning, agricultural labour, services in government department, public sector and private concerns.

Several authors have mentioned the backwardness of tribal people. As M. Trivedi (1991) rightly pointed out that "Throughout history they have been exploited by the non-tribals.... Yet some of the non-tribals groups have made their way into the tribal region and have become parts of the tribal society, having a separate non-tribal identity. They have emerged as exploiters of the tribals and money-lenders and big landholders".He further mentioned that



the backwardness in the tribals is mainly due to high population pressure which contributes to pressure in land holding. It is added by the lack of traditional occupations like the high caste Hindus, lower efficiency of governmental machinery, the unsatisfactory situation of technological adoption. The analysis of discussions carried out by Trivedi (1991) indicates that the natures of backwardness among the tribals are both social and Economic in nature.

The researches and studies on tribal reveal backwardness of the tribal people. The development could be an effective medium for removing the backwardness. One important way to bring development would be encouraging more and more entrepreneurial activities, assisting more entrepreneurs in their ventures and rearing more entrepreneurship among the tribals. Owing to the backwardness of the Tribal population the Government of India has been making painstaking efforts by helping through different programs and schemes. Integrated Rural Development Program (IRDP), Jawahar Rojgar Yojana (JRY), Prime Ministers Rojgar Yojana (PMRY) and Training for Rural youth Self Employment (TRYSEM), Education Guarantee Scheme (EGS) are major programs and schemes (Source-<http://tribal.nic.in>) in this context. The Government also provided certain privileges in the constitution which gave protective discrimination to the tribal people. Article 275⁴, Article 46⁵ and Article 335⁶ are some of them. The main thrust of the development strategies and constitutional provisions were to remove poverty in tribal areas, provide opportunity for sustainable development and give the tribal population constitutional boost for

development. These constitutional approaches, schemes and programs are bringing new hopes and direction towards the development of entrepreneurship among tribals.

But there are studies that have found things to the contrary and have observed that there is either no significant change in the condition of social inequalities of tribals as a consequence of constitutional safeguards and anomalies have further accentuated and deteriorated. The National Institute of Rural Development (NIRD), in its Report on Rural Development Statistics 2011-12, calculated the poverty among STs in Rural & Urban India for years 2009-10⁷. The report revealed that in 2009-10 poverty among tribals were 47.1% and 28.8% in rural and urban areas respectively with the total national percentage of 33.8% and 20.9% in similar categories. Data published by Planning Commission (2004-05) also suggests that between Scheduled tribes (ST), Scheduled Castes (SC), Other Backward class (OBC) and others the ST population is having most percentage below the poverty line (BPL)^{8,9}. It is true for both rural and urban areas. In rural areas the percentage of people living below poverty level among ST, SC, OBC and others are 47.2%, 36.8%, 26.7% and 16.1% respectively. While in urban areas the figure stands as 39.9%, 33.3%, 31.4% and 16% respectively.

On the light of the aforesaid discussion, present paper focuses on the different issues in the study, inter-linkages between the issues and new patterns emerging out of the study. Further, the study finds the rationale in the existing literature relating tribal entrepreneurship and provides important recommenda-

tions for effective future study in the topic.

Tribal Entrepreneurship in literature

The first thing that comes up while discussing tribal entrepreneurship is that the entrepreneurship pattern in tribals compared to the non-tribals. According to Trivedi, M (1991) structure and functioning of tribal entrepreneurship are determined by several factors. Age old isolation, hostile geographic condition and feudal exploitation are some of them. On the basis of studies carried by Bogaert, S. J (1975)¹⁰ it could be said that the tribals are lagging far behind their non-tribal counterparts in starting their business ventures. It is mainly due to the backwardness of the area they live in. Bogaert further emphasized the need of training and ready-made models as possible solutions to get rid of the hindrances. On studying the entrepreneurial development among the tribal society Doshi, S. L. (1971)¹¹ felt that with respect to the regional society which consists of both tribal and the non-tribal population, tribals (study carried on the Bhil tribes) lack social awareness. Further his study pointed that entrepreneurship development and self-awareness are directly related to each other. The fall backs among tribals with respect to their non-tribal counterparts was studied by Iyer L, Khanna T and Varshney A (2013)¹². By the help of Economic Census of 1990, 1998 and 2005 they showed that there is significant caste difference in entrepreneurship pattern in India. The outcome of this part indicates that tribal lag behind the non-tribal in entrepreneurial endeavour due to various social, political and geographical reasons.

Today international and national economies are joined to each other. This reason has an effect on the international economy, international economy on the national economy and national on the local economy. As a result, effects of changes in international and national economic environment could trickle down on the local economy. Rural economy comes under the ambit of the local economy. Tribals are mainly based in rural areas (Hooja M, 2004 and <http://tribal.nic.in/>)^{13&14}. So, rural economy spells its part upon tribal employment and entrepreneurship. The international and national phenomenon, globalization and economic reforms have their influence in the rural economy and tribal entrepreneurship. Thus, to study tribal entrepreneurship the influence of international and national phenomenon couldn't be left out. The changes that occurred by 1990s economic reforms and globalization followed by it had their say in tribal entrepreneurship in India. Komaraiah, J. B. (2008)¹⁵ explained how 1990s economic reforms brought development opportunities among the tribes. An impact of globalization was further studied by Jain, P. C. (2001)¹⁶. He compared the past and present form of globalization. His study revealed that new form of globalization was in the hands of information technology followed by technocapitalism and consumerism. The earlier version was concentrated in weekly market. He further feared that the development would push the tribals into marginalized position and tribals are not fully equipped to face the force of globalization. Sah, M. L. (1985)¹⁷ studied the result of economic reforms and re-orientation on tribal occupation. His, empirical



studies suggested that instead of traditional occupation, the tribal population is inclined towards the service sector having jobs of varied nature. Major observation by Doshi, S.L (1986)¹⁸ pointed towards the new economic policy for boosting the tribals with actions that are charged by the motivation of development. The analytical framing of tribal Entrepreneurship was carried out by Trivedi; M (1991). He felt that the tribals took entrepreneurship as an option is a recent phenomenon. The tribals shifted from one livelihood option to another and at the recent times they had selected the option of entrepreneurship. So this part emphasizes upon changing pattern of tribal entrepreneurship and employment in the hands of globalization, economic reforms, shortage of resources and government initiatives.

The government is dedicated to facilitating the tribal population and brings up more entrepreneurs among different sections of the population. Some of the programs and schemes discussed in the introduction section reflected government's commitment. In the case of Bhutias of Munsiri, Sah, M. L. (1985) hailed the efforts of the government to establish training-come-production center and appointment of special officials to look after the progress. Mohanty, S and Sahu, A (2015)¹⁹ and Anuradha, R.V (1998)²⁰ study on Tribal cooperative marketing development federation of India Ltd. (TRIFED) and Tropical botanical garden and research institute (TBGRI), constituted by the Government of Kerala were worthy in this direction. TRIFED accelerated economic development of tribal people by providing wider exposure to

their art and crafts all over India. TBGRI is a center for plant research an autonomous institution for research and development set up by the Government of Kerala. They promoted local tribe Kani's indigenous knowledge and produced anti-stress drugs "Jeevani". They shared 50 per cent of the commercial returns that they get from the drug with the Kanis which boosted their livelihood generation. The Government of India's various programs which were made for mass development proved to be beneficial for tribal population. Study of Ramaswamy, R and Jyoti Kumar, N.V.R (2013)²¹ and Mandal D, Majumder A and Bhattacharyya J (2013)²² on union government's cluster development and Self-Help Group (SHG) development plan provides necessary inputs in this direction. The cluster development plan provided an opportunity for tribal dominated Thenzawl handloom cluster in Mizoram and SHGs proved to be beneficial for the uplifting of tribal women in Sunderbans of West Bengal. So this section provides important inputs regarding union government's effort in boosting up tribal entrepreneurship by direct and indirect programs and schemes.

After the role of the government and government-backed organisation(s) for tribal entrepreneurship development, this paragraph considers the role of the non-government organisation. Non-governmental educational institutes play important roles in entrepreneurship promotion, development and provide important inputs for sustainable development. Lakshmi, M.R and Kumar; V.D (2014)²³ analyzed the case of Kalinga Institute of Social Sciences, Bhubaneswar (KISS) in this direction. The organization provides special support towards

entrepreneurship development among the tribal poor. Srivastava, N and Syngkon, R.A.J (2007)²⁴ tried to explore the status of entrepreneurship development as well as marketing strategies of the entrepreneurs running the Small Scale Industries(SSI) in the tribal dominated area of East Khasi Hills, a district of Meghalaya. The outcome of the study revealed that products of the SSI are mainly to cater the needs of the local market. The outcome of the section suggests that- Non-governmental organization's role is important for the development of tribal entrepreneurship and entrepreneurship in developing the local economy.

Due to remoteness and isolation often tribal people are deprived in getting modern tools, techniques and technologies which can solve their problems of daily life. As a result, they rely mostly upon their indigenous practices and try to bring up ground-level innovations. When the touch of modern technology embraces the primitive practices the output could be stunning. In line to this study Sahoo, M P and KalyaniM (2013)²⁵ placed the case of Mahali community of Mayurbhanj district of Orissa. The community has their expertise in bamboo crafts manufacturing and bamboo growing in their barren land. Anuradha, R V(1998)'s study on Kani tribes and the helping hand exerted by TBGRI provide important support to the argument. The studies emphasized the need towards honing up the indigenous skills and expertise of the tribals and using them for generating employment and entrepreneurship among the tribals.

Attitude, interest and motivations are the responsible factors to convert one's

job into his entrepreneurial venture. Pandey, D.K and De, H.K (2015)²⁶ tried to find the same by taking up the study among the tribal farmers in Tripura. The outcome of the study was not encouraging as respondents were found to possess a medium level of innovativeness, motivation, risk taking ability. The study also found that entrepreneurial behavior was highly influenced by information source utilisation and level of aspiration. Study of Bulsari S(2013)²⁷ discussed royal Galicha carpet industry located in Tapi district in Gujarat. Local tribal population by their skills and knowledge started the industry, but less remuneration led women joined with the industry to take alternative routes of occupation. The section suggests there is a need to develop existing skills and expertise of the tribals so that they can bring up their own entrepreneurship. Also, there is a need for the proper attitude, motivation and interest backed by an appropriate market strategy to run the business.

Money-lenders, individual money-lenders or money-lending organization, use to play an important role towards the development of entrepreneurship. Sachidananda (1968)²⁸ studied about tribal entrepreneurs in Bihar. There he focused on the emergence of tribal money lenders. He felt that they were not different from traditional non-tribal money lenders in terms of exploitation of the borrowers. Studies by Mohapatra A.S, Behera R and Sahu, U N (2012)²⁹ in the context of Mayurbhanj district in Orissa and study by Parthasarathi, I (2000)³⁰ in the context of Paderu Mandal of Andhra Pradesh revealed that the tribal entrepreneurs lack awareness on rural schemes which provide credits to the entrepreneurs. There is also a lack of



institutional finance. This pushes tribal entrepreneurs to borrow money from the non-institutional money lenders. The outcome of this part is that Credit system plays an important role in the growth of tribal entrepreneurship. The tribals face several problems regarding the money-lending and borrowing system. So awareness regarding the credit system should be raised on urgent basis.

Scheduled tribes are predominantly rural based (Hooja M, 2004). So the tribal entrepreneurship could well be supported by agricultural and rural entrepreneurship. Taking the relation into account Sharma, G (2015)³¹ raised the importance of rural entrepreneurship in rural areas of Assam. Also, Rajkonwar, A B and Neog J(2011)³² advocated for generation of more and more agricultural entrepreneurship opportunities in Karbi Anglong District, a hill District of Assam where the majority of the population are tribals. The studies suggest that there is a need to integrate tribal entrepreneurship with agricultural entrepreneurship and rural entrepreneurship. This will benefit all the forms.

Socio-psychology takes feeling, thoughts, beliefs, intentions and goals construction into consideration. It influences psychological factors of an individual, especially when he/she interacts with others. On the other hand, entrepreneurship uses man, material and capital for the benefit of the humanity. Relevant question joining two factors, i.e, Socio-psychology and entrepreneurship is that- if there are influences of socio-psychological variables for development of the tribal entrepreneurship. Study linking these factors were conducted by SahooM.P, Kalyani M and Hathy P.R (2014)³³ and by

Hajong,D and Sharma, J.P (2010)³⁴. An important consequences of the studies were that- Entrepreneurship orientation dochange in the same direction with respect to education, socio-economic status and aspirations, but age is negatively correlated to entrepreneurial orientation. Thus, younger people from the tribal community have more entrepreneurial orientation. Pandey, D.K and De, H.K (2015) s study on tribal farmers in Tripura (already discussed) also acted in the same direction. The result of this part suggests that- Socio-psychological factors are internal factors of a human being as the entrepreneurs. They place significant difference on the behaviour of entrepreneurs on the basis of control or non-control of these factors.

Pattern and Issues in the Study of Tribal Entrepreneurship

Series of studies on tribal entrepreneurship considered several issues and sub-issues in the issues. This section one by one covers the issues and sub-issues underlying.

A. Issues in the study of tribal entrepreneurship

On the light of the aforesaid discussion main issues in development of tribal entrepreneurship in India are as follows-

1. Tribal versus non-tribal entrepreneurship
2. Change in tribal Entrepreneurship Pattern
3. Government's efforts for development of tribal entrepreneurship

4. Role of Non-governmental organizations in tribal entrepreneurship development
5. Indigenous development of tribal entrepreneurs
6. Role of credit facilities and money lending organizations/institutions.
7. Role of other form of entrepreneurship
8. Role of socio-psychological parameters to develop tribal entrepreneurship

B. Sub-issues in the study of tribal entrepreneurship

In this section sub-issues under each issues and the major contributors of the issues are been discussed in tabular form.(Refer Table 1.)

C. Inter linkages between the issues of tribal entrepreneurship and pattern generation

Existing literature has raised several issues in the study of tribal entrepreneurship. So the study is not one-dimensional, but multi-dimensional in nature. The author suggests definite inter-linkages between the issues. Figure-2 depicts the inter-linkages as follows.

Every tribal entrepreneur belongs to a definite tribal community. Entrepreneurs take care of their community by the help of the entrepreneurship. By the help of available capital, human resources and material resources they create the enterprise which helps the

tribal community in a large. Again, the growth of a tribal entrepreneurship is highly influenced by different organisations and institutions. The growth is also influenced by the indigenous endeavor, skills and expertise of people of the community. Other influencing factors are the effects of globalization and economic reforms or in the broader form the events in the national and international front. These influences have long-term output in the livelihood and employment patterns of the tribals by evoking changes in tribal employment and tribal entrepreneurship.

Series of works carried out by different researchers, scholars, authors, institutional bodies and different organizations are having high importance with respect to the present scenario. Their importance could be considered from different angles. Following discusses the importance of the studies.

- The studies carried out by different researchers, scholars, authors, institutional bodies and different organizations reflect the works carried out until now in the direction of tribal entrepreneurship. Note of the works could be further used for searching the gaps of the works or to search that what are the works still left to be carried out by the researchers, scholars, authors, institutional bodies and different facilitating organizations. The studies could further work as an archive and readily available resources for researchers, scholars, government and government bodies, NGOs, humanitarian organizations, different facilitating bodies and other non-government bodies working on tribal entrepreneurship.

Table 1

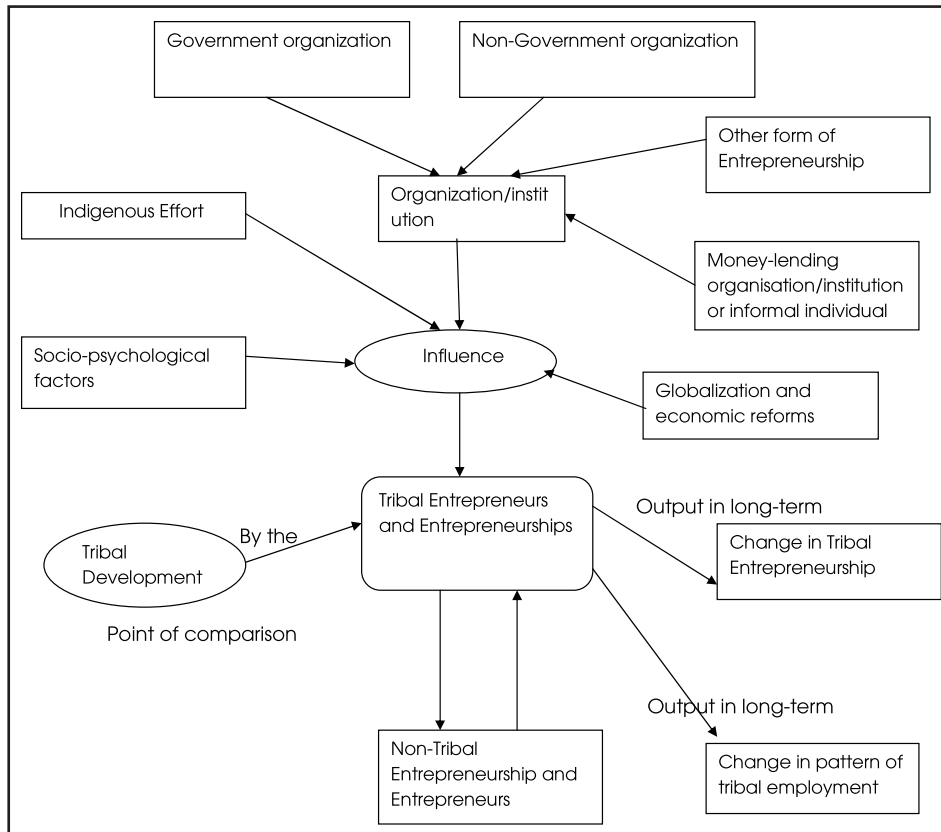
Issues	Sub-Issues
Change in tribal Entrepreneurship Pattern	<ul style="list-style-type: none"> a) Effect of economic reforms b) Effect of globalization c) Change in occupational pattern d) Natural reasons for change e) Change in livelihood
Tribal versus non-tribal entrepreneurship	<ul style="list-style-type: none"> a) Overview of tribal entrepreneurs. b) Points of lacking for tribal entrepreneurship. c) Possible push-up points for tribal entrepreneurs. d) Comparison of tribal and non-tribal entrepreneurship. e) Present position of the tribal enterprises (by statistical support)
Government's efforts for development of tribal entrepreneurship	<ul style="list-style-type: none"> a) Direct efforts b) General effort and its positive effect on tribal entrepreneurship
Role of Non-governmental organisations in tribal entrepreneurship development	<ul style="list-style-type: none"> a) Role of educational and non-educational institutes. b) Role of Small scale Industries.
Role of other forms of entrepreneurship	<ul style="list-style-type: none"> a) Role of Agri-entrepreneurship b) Role of Rural Entrepreneurship c) Point of connection between the entrepreneurs
Role of credit facilities and money lending organizations/institutions	<ul style="list-style-type: none"> a) Nature of new money lenders from tribal community b) Measuring tribal communities awareness in money lending c) Lack of institutional finance d) Influence of non-institutional and informal money lenders

Contd..

Table 1

Issues	Sub-Issues
Indigenous development of tribal entrepreneurs	<ul style="list-style-type: none"> a) Organizational support for tribal-knowledge development b) Support for upliftment of indigenous skills and expertise c) Study of important ingredients among tribals for entrepreneurship development. d) Situation of the enterprises built by skills and expertise of tribals.
Role of socio-psychological parameters to develop tribal entrepreneurship	<ul style="list-style-type: none"> a) Focus area of socio-psychology b) Special parameters of socio-psychology considering tribals. c) Focus area of entrepreneurship and its development. d) Point of co-relationship between parameters of socio-psychology and entrepreneurship especially focusing tribals

Figure 2 : Interrelation between the issues in study of Tribal Entrepreneurship



- The studies are also useful for the union government towards developing tribal entrepreneurship. It will help the government to further push any existing programs with further addition, adding important ingredients from schemes or programs to another existing scheme or program, merge two programs to provide more benefits from a single plan or scheme to the tribal entrepreneurs, rectify the part of the schemes or programs which are ambiguous or created problem(s) in past.
- When a non-governmental organization takes the responsibility along with the governmental bodies for tribal development the outcome of benefits is manifold in nature. Also, the endeavor relaxes the shoulder of the government from further burden to some extent.
- The study is useful for providing knowledge of different credit facilities available for the tribal

entrepreneurs.

- In many ways, tribal entrepreneurs are lagging behind their non-tribal counterparts (Trivedi, M, 1991). The studies provide in-depth analysis of social, political and strategic reasons behind it.
- The study also consist various case-studies to hail the achievements achieved by the tribal entrepreneurs and also reflect various issues and problems that acted against the tribal entrepreneurs.

Recommendations and Conclusion

Pattern and issues discussed presents an account of all the studies carried out with respect to Tribal Entrepreneurship in the Indian context. It is also having an importance within it, i.e, it provides direction to the further studies to be carried out.

- There are various tribal entrepreneurs in India. But the studies lack to measure the extent of Entrepreneurial intensity within the organizations and for the entrepreneurs individually (Morris M et al, 1994³⁵, Heilbrunn S, 2008³⁶). In the same way, Entrepreneurial intention, i.e, person's conviction about starting and running one's own firm is a suitable alternative for him/her or not (Davisson P, 1995)³⁷ could also be focused.
- Global Entrepreneurship Monitor Report, India (GEM Report, India 2013)³⁸ has studied entrepreneurial attitudes, activity and aspirations which are various dimensions of entrepreneurship and at the same

time important components to generate innovation, economic growth and job creation. Same sort of measurement study should be carried out to measure the same for the tribal entrepreneurs. Also, the total tribal entrepreneurs could be segregated into potential, intentional, nascent, new, established and existing entrepreneurs. It will provide a clear picture about the segmentation of tribal entrepreneurs and help in further policy framing.

- There is also a need to study about the ranking (or provide points) of the entrepreneurs and also their entrepreneurial ventures, which are necessary to measure the health of the ventures and the performances of the entrepreneurs. (As NAAC provides ranking for the educational institutes).
- There are needs to take out more studies in the changing nature, patterns and issues of tribal entrepreneurship with the change of geographical region.
- Mudra Bank³⁹, Jan Dhan Yojana⁴⁰ and Digital India program⁴¹ are the new developmental schemes launched by the Government of India. Studies are needed in the context of these new entrants to measure the influences of these two on the tribal entrepreneurship.

Madhusudan Trivedi(1991) in his book "Entrepreneurship among tribals" said that tribal entrepreneurs are lagging behind their non-tribal counterparts. More studies and researches are needed for their development. The



need of the hour is to hone their existing skills, expertise and knowledge by specialized training and knowledge. It will provide them with needed inner strength to grab external opportunities coming in their way. Grabbing external opportunities will provide them sustainable development, provide greater employment opportunity and provide new avenues for entrepreneurial development. The change process is going in a slow but in a sure manner. Globalization and economic reforms are two international and national happenings fanning the process. More studies are needed in this direction. There is also need for bringing new approaches in the existing study pattern. More and more national and international occurrences and their impact into local issues and their further penetration into the avenues of employment generation for the tribals should be taken into consideration. Also, there is a need for standardization where the overall performance of the tribal entrepreneurs could be checked with respect to their past performance and also with respect to their non-tribal counter-part.

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ICT Entrepreneurs: What is needed for Smooth Execution and Expansion of Business?

Abstract

Entrepreneurship is the key to economic development and employment creation for any nation. Recognising the potential of the sector the government plans to promote entrepreneurship in Information and Communication Technology (ICT) space. In the context, based on responses from existing ICT entrepreneurs, this article attempts to gain insights on challenges faced by ICT- entrepreneurs in managing their firm. Steps they plan to take to overcome these challenges and their recommendations for large-scale growth of ICT enterprises are also presented along with crucial recommendations for boosting ICT firms.

Key Words

Information and Communication Technology (ICT), Entrepreneurship, Business, Economic Development

Background

Information and Communication Technology (ICT) broadly covers two sectors viz. Information Technology and Communication. With the entry of many multinationals and SMEs, in addition to emergence of startups on large scale, the ICT sector in India has demonstrated

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incredible growth (Swissnex, 2015). Besides, India is one of the fastest growing telecom markets in the world. Capitalising on its advantages of talent pool, lower cost of operations and the innovative remote delivery model, India has emerged as preferred destination for ICT services in the global market. By virtue of the rapidly developing domestic market and rising exports, ICT sector is likely to grow by 13% in 2015.

Entrepreneurship is the key to economic development and employment creation for any nation. Recognising the potential of the sector the government plans to promote entrepreneurship in ICT space. A revenue of \$300 billion and exports of \$ 200 billion by 2020 is expected by widening the entrepreneurial base in IT and ITES sub-sector (NPIT, 2012). The National Association of Software and Services Companies (NASSCOM) has recently launched 10000 start-ups initiative. Also at national and state levels many other initiatives are in pipeline to facilitate emergence of ICT start-ups.

Fostering entrepreneurship as underlined by Curtain (2003) is a difficult process owing to dependence on many supporting components at various stages viz. initiation, successful execution and growth. Although investment support in terms of angel investors,



venture investors and debt funds coupled with incubation support extended with the help of Government are in place, nurturing entrepreneurship is not an easy task owing to number of barriers. Majority of start-ups fail due to poor execution of business functions. While ground is set to facilitate creation of start-ups in ICT sector, it would be essential to create a conducive environment so that the chances of post-launch failure are mitigated and these units become sustainable.

In the context, based on responses from existing ICT entrepreneurs, this article attempts to gain insights on challenges faced by ICT- entrepreneurs in managing their firm. Steps they plan to take to overcome these challenges and their recommendations for large-scale growth of ICT enterprises are also presented along with crucial recommendations for boosting ICT firms.

Database and Method

This study is based on primary data of 52 ICT units from four regions of the country viz. East, West North and South; drawn from a large-scale study of Indian hi-tech entrepreneurs, conducted during November 2014 and February 2015 using a structured schedule. By and large these entrepreneurs are involved in development of software, simulations, mobile applications, web-based applications, hardware devices, embedded systems etc.

Data related to background information, drivers of choosing entrepreneurship as a career; various problems faced in smooth conduct of operations and in executing growth plans; along with suggestions to overcome these

problems have been used.

Qualitative data were classified into meaningful categories using content analysis. Descriptive statistics like percentages and averages have been used for analysis. Percentages in questions with multiple responses have been reported with respondents as base and hence the total may exceed 100%.

Profile of Entrepreneurs

Table-1 shows that majority of the entrepreneurs are males (92%), below 40 years of age (69%), have a degree in engineering/science (67%), come from families in occupation other than business (67%). Sixty four percent report their family income at the time of starting business to be below Rupees 1 million/annum. Approximately, 55% units are located in southern region whereas the remaining is more or less evenly distributed in the other three regions of the country. About 40% are in existence for less than 4 years. More than 82% are private limited entities. Approximately, 61% could get mentorship support in the initial phase. Almost 80% entrepreneurs report that they had difficulty in managing funds at the initial stage of their entrepreneurial journey. A little less than 50% of the units are involved in exporting their products/services. Drive for innovation (33%), being one's own boss (29%), passion to create wealth (21%) and better prospects (21%) emerge as major drivers for selecting entrepreneurship as a career option.

It is observed from Table-2 that majority of the units after a modest beginning have grown reasonably in terms of investment, turnover and employment. The firms currently portray an average of

Table-1: Profile of ICT Entrepreneurs

Region	Percentage	Gender	Percentage
East	13.5	Males	92.0
West	15.4	Females	8.0
North	15.4	n	52
South	55.7		
n	52		
Education	Percentage	Age Group	Percentage
Bachelor in Eng./Sci.	50.0	20 - 29	30.7
Masters in Eng./Sci.	17.3	30 - 39	38.5
Masters in Management	13.5	40 - 49	17.3
Ph.D.	7.7	50 & more	13.5
Others	11.5	n	52
n	52		
Family Background	Percentage	Average Family Income at Inception	Percentage
Service	53.8	< 5 Lakh	40.4
Business	23.1	5 - 10 Lakh	23.1
Agriculture	23.1	10 - 20 Lakh	25.0
n	52	more than 20 lakh	11.5
		n	52
Age of Enterprise	Percentage	Type of Ownership	Percentage
< 2 years	7.7	Proprietary	15.4
2 – 4 years	32.7	Partnership	1.9
5 – 9 years	36.5	Private Limited	82.7
10+ years	23.1	n	52
n	52		

Contd..



Table-1: Profile of ICT Entrepreneurs

Difficulty in Managing Funds Initially?	Percentage	Reasons for Selecting Entrepreneurship as Career**	Percentage
Yes	79.0	Driver For Innovation	32.7
No	21.0	Being Own Boss	28.8
n	52	Passion to Create Wealth	21.2
Do You Export?	Percentage	Better Prospects than Job	21.2
Yes	48.1	n	52
No	51.9	** Multiple Responses	
n	52		

Table-2: Initial and Current Investment, Turnover and Employment

Investment Class (Rupees)	Initial Investment %	Current Investment %
< 25 lakh	78.8	43.1
25 – 50 lakh	13.5	9.8
50 – 1 crore	1.9	17.6
1 – 5 crore	5.8	23.5
>5crore		5.9
Average		
n	52	52
TurnoverClass (Rupees)	Initial Turnover %	Current Turnover %
< 25 lakh	88.6	39.2
25 – 50 lakh	11.4	9.8
50 – 1 crore		13.7
1 crore – 5 crore		29.4
>5 crore		7.8
n	44	51
Employment Class	Initial Employment%	Current Employment%
< 5	52.4	4.4
5 – 9	35.7	24.4
10 – 24	9.5	22.2
25 – 49	2.4	33.3
50 +		15.6
n	42	45

34 employees; an average investment of Rs. 13.6 million and average turnover of Rupees 16.4 million. More than one-third of the entrepreneurs affirm that their market share has increased over time.

Problems in Executing Business

High mortality rate of enterprises in general and ICT units in particular during execution stage requires special attention. Besides efforts to promote start-ups, an enabling environment is necessary to assure that the enterprises mature, grow and become sustainable in the long run. For this purpose it is essential to understand various operational problems faced by ICT entrepreneurs. This section highlights problems hampering general operations besides specific issues related to marketing, exports etc. faced by ICT entrepreneurs. The problems faced have been presented in Table-3.

Challenges in Smooth Production:

According to the respondents the issues hampering smooth production are maintaining employee motivation to reduce attrition (42%), delay in payment recovery that leading to cash crisis (17%), lack of functional skills (11%), infrastructure constraints (12%), and regulatory issues (10%). The 'others category' (11%) includes problems related to finance, manpower shortage, qualifying norms for bidding etc. Almost 31% entrepreneurs reported that they had no problem in smooth production.

It is evident that operational problems more or less are linked to functional

issues, and hence it is essential to delve deeper into problems related to marketing, finance, exports etc.

Hurdles in Enhancing Market:

The major hurdles faced by ICT entrepreneurs for enhancing their market comprise financial constraints (62%), inadequate market information (50%), stiff competition (31%), lack of appropriate marketing team (27%) regulatory issues (21%) and poor branding (19%), Low marketing budgets (9%).

Issues related to Export:

Forty eight percent of the ICT units covered in the study report that they export their products to USA, UK, some countries in Africa, Europe and UAE. The problems related to exports, faced by these entrepreneurs are varying rules and regulations in different countries (36%), procedures and formalities laid down by Indian Government (28%) and management of logistics (20%). Around 16% entrepreneurs mentioned that they have no problem in exports.

Constraints related to Finance:

It was observed that the major issues as regards finance are working capital shortage owing to delay in payment recovery (46%), knowledge based products in-progress or in finished state are not treated at par with financeable physical assets (44%), no qualified finance staff (39%), reluctance of banks to give operating finance/ funds against orders (29%), and delays in getting refunds (15%) and difficulty in getting advance payment from clients (10%).

Table-3: Various Problems Faced by ICT Entrepreneurs in their Business**

Problems in Smooth Production	Percentage	Problems in Enhancing Market	Percentage
High attrition	42	Finance Constraints	62
Delayed Payment Recovery	17	Inadequate Market Information	50
Lack of skill	12	Stiff Competition	31
Infrastructure constraints	12	Lack of appropriate Marketing team	27
Regulatory issues	10	Regulatory Issues	21
Others	12	Poor Branding	19
No problem	31	Low Marketing Budget	9
n	52	n	52
Problems in Exports	Percentage	Problems Related to Finance	Percentage
Country Specific Regulations	36	Working Capitals Problems	46
Government Procedures	28	Getting Finance on Knowledge based Products	44
Logistics	20	No Qualified Finance Staff	39
No problem	16	Banks do not Lend against Orders	29
n	25	Delay in Getting Tax refunds	15
		Not Getting advance from Clients	10
		n	52

Contd..

Table-3: Various Problems Faced by ICT Entrepreneurs in their Business**

Problems Related to Human Resource Management	Percentage	Problems Hampering Growth	Percentage
Shortage of skilled of workforce	54	Getting Skilled Manpower	68
High employee turnover	41	Managing Funds	57
Need qualified HR team	39	Regulatory Norms	18
Training/Retraining needs	15	Launching New products	13
n	39	n	37
Requirements for Large Scale Emergence of ICT Enterprises	Percentage		
Single window clearance system	78		
Easy Loan at low Interest	44		
Financial incentive for innovative products	44		
Financing Knowledge asset	28		
Education Institute should produce Industry ready Individuals	19		
Need for Lucid Tax Structure	14		
n	32		

**** Percentages may exceed 100 due to multiple responses**



Concerns related to Human Resources

The analysis showed that the major HR problems encountered are shortage of skilled manpower (54%), high Employee turnover (42%), lack of qualified HR team (39%) and need for Training/retraining expenses due to rapid changes in technology (15%).

Hurdles in Executing Growth Plan:

More than 71 percent of the entrepreneurs report that they have charted a growth plan for their enterprise. However, these entrepreneurs anticipate certain challenges in executing their plans. The major challenges in pursuing the growth agenda are getting skilled manpower (68%), managing funds (57%), regulatory norms (18%) and successful development of new product (13%).

Actions Planned to Overcome Growth Challenges

ICT entrepreneurs have charted out plans to overcome challenges that hinder their firm's growth. More than 45% of the entrepreneurs plan to offer stock option to their employees to overcome problems related to acquisition and retention of skilled manpower. Almost 31% plan to bring in experienced cofounder to handle managerial deficits, regulatory issues and product improvement. Approximately one-third of the entrepreneurs have plans to arrange finance from their own sources to overcome issues related to funds. Twenty eight percent owners are planning to enhance their market reach by investing more in promoting their products and around 17% have focus on enhancing features and quality of

their products.

Suggestion for large-scale emergence and growth of ICT firms

Suggestions related to interventions required for large-scale emergence and growth of ICT firms were also collected from these entrepreneurs. Suggestions given by 32 entrepreneurs in this regard are discussed here. More than 78% respondents recommend a need for single window clearance system for dealing with banks and other authorities. Around 44% entrepreneurs want easy loan at lower interest rate and the same percentage suggest financial incentives for innovative products. More than twenty eight percent recommend that some system should be developed for valuation of knowledge assets so that it can be treated as a financeable asset. Around 19% entrepreneurs recommend that educational institutes should produce industry ready individuals. Lucid tax structure and facilitation for finance are the two options recommended by 16% entrepreneurs.

What can be done?

With limited job opportunities available to youth in India, entrepreneurship development is crucial for job creation and economic development. Though a large number students graduating from institutions offering courses on ICT have potential to become entrepreneurs, efforts are made by the government to boost the start-up rate in ICT, a lot needs to be done to assure that these start-ups sustain and become mature in the long run. Given below are some important recommendations for smooth functioning and growth of ICT firms.

- Paper work/ documentation related to government clearances, bank loans should be simplified by means of computerised systems that enable appropriate tracking.
- Industry associations should facilitate firms in tackling manpower issues by interlinking firms producing similar products and maintaining a database of free-lance professional who can be roped in to handle product delivery crisis. It is worth mentioning that NSDC and NASSCOM have initiated various activities to address shortfall of skilled manpower
- As knowledge assets are not financeable due to problems of valuation, other established ICT firms should develop a system of valuation of intermediary and final knowledge products and provide financial support to help firms facing financial problems in smooth operations. Financial support may also be provided against orders received by these firms. Financing in this mode should be extended to firms facing financial limitations in pursuing their growth agenda. These activities should form a part of their corporate social responsibility.
- Banks and Financial Institutions must simplify norms of lending to ICT firms
- Facilitation should be extended to these firms so that market reach is enhanced. A portal should be created by local association to help these entrepreneurs.
- A common online facility should be created to provide access to

market information needed by these entrepreneurs. It should also include information related to bidding opportunities /tenders.

- Industry associations and academic institutions should provide mentoring support to firms and help them in resolving their problems
- A strong Industry-academia network is essential to assure that the requirement related to skilled manpower in ICT firms is adequately addressed.

Despite Credit Guarantee Fund Trust for micro small and medium enterprises (CGFTSME) for collateral free funding, skill development efforts by NSDC, ICT enterprises have not been able to get adequate support for smooth operations and growth. Let us hope that 'Digital India' and 'Skill India' initiatives coupled with appropriate financial facilitation, if pursued in true letter and spirit will create a conducive environment for existing ICT entrepreneurs and lead to realisation of the dream 'Make in India'.

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Innovation, Collaboration and Learning in Regional Clusters: A Study of MSMEs in India

Abstract

The role of collaborative relations in geographical proximity helps in creating innovation process of small and medium enterprises. The advantages to be gained from collective learning from local clusters help MSMEs to increase their efficiency. The regional innovation plays an important role for institutional context of developing innovation. Innovation will emerge through collaboration and shared learning with similar enterprises that leads to mature the idea for proper conceptualization. This paper reviews and summarizes the most important ideas and initiatives of theorizing the evolving of process of innovation through collaboration and learning in regional cluster.

Key Words

Regional Cluster, Innovation, Learning, Collaboration

Introduction

Business survives only when the capability related to profitability, sales volume and growth will exist. It is equally true for Micro, Small, and Medium enterprises in India. It has been noticed that there are organization that have lot of scope of improvement but still they are not capable to tap the market due

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to lack of information, and networking. It has been evident from the literature that collaborative learning will be a part of knowledge driven component, then innovative approach of solving problem will come up as a part of the business operation. Learning theory now recognises that learners construct and interpret knowledge and are not merely passive receivers of knowledge. Mental, physical and emotional capacities are not fixed at birth, but change through interaction with environment. Learning is also situated (Vygotsky 1978). Individuals learn in different ways through multiple modalities and complex communication practices involving multi-literacies. Learners as sense makers are co-producers of knowledge who bring 'funds of knowledge' with them into school (Cortez 2010). As the focus of innovation is increasing, the collaboration approaches of cluster members are highly required. As per the seminal work of Michael Porter (1998), policy makers at regional, national, and international scales have concerned with the promotion of business clusters connected with specialized suppliers, service providers, firms in related industries. As competition is growing in regional, national and international markets, small and medium-sized enterprises face acute pressure. Hence



to enhance the competitiveness of entrepreneurial ventures, collaborative learning system should be applied. In order to identify the strength and weakness in small business sharing of ideas as well as knowledge is required to scan the present strength of business operation. In the dynamic and competitive market condition, businesses have the acumen to respond their external environments, and ultimately build the business relationships to maximize their efficiency. MSMEs are facing financial resource constraint to move forward in the business.

Literature Review

Regional innovation system emerges from the co-operation activity between firms and knowledge creating and diffusing organizations. It is equally applicable to micro, small and medium enterprises too. The concept of regional innovation system has emerged as a policy focus towards promotion of localized learning processes to gain competitive advantage. The collaborative nature of innovation process has reinforced tendency towards geographical clustering (Storper, 1997). In some of the most dynamic and fast growing regions, high levels of innovation were fostered by localized collective learning activities involving exchange of knowledge. The recent emphasis in economic geography is having link between innovation, network and collective learning is premised upon a different understanding of innovation. Freeman (1994) has emphasized the connections and linkages between different elements of the production system. Lundvall and Johnson (1994) focused on tacit knowledge which

created incremental forms of innovation involving small adaptations to products or organizational change.

In the current industrialized world, governments and their diverse agencies emphasize the need to increase the propensity and success of open and collaborative innovation (OECD, 2008; Chesbrough, 2006). One of the important dimensions of successful innovation - beyond sufficient direct investment in academic or private R&D - is the extent of collaboration between universities and enterprises through technology transfer (e.g., R&D partnerships, industrial chairs, licenses, and spin-offs). However, Canada performs poorly in this regard (Government of Canada, 2011).

Moreover, experts and governments attribute the poor university-enterprise collaborations performance to: i) a large proportion of MSMEs in most developed economies, knowing that small businesses show much lower innovation-absorption capabilities than their larger counterparts and ii) a lack of effective technology transfer and flexible IP-management rules from universities. Indeed, the organizational structures and institutional rules of universities are aligned with a long-term vision of knowledge development and diffusion, which tends to inhibit IP transfer and sharing, and is out of phase with MSMEs' short-term need for commercialization of innovations (OECD, 2008).

In order to produce and successfully commercialise innovation, firms must synthesize a wide variety of expertise and knowledge produced by different complementary sources. Firms both learn from internal sources of knowledge

such as through R&D activity and from a wide variety of external sources (Malerba, 1992). These external sources are represented by many organisations such as universities and research institutions, government laboratories and agencies, competitors, suppliers and customers (Dosi, 1988). Firms' collaboration with external institutions allows the expansion of their range of expertise and can support the development of new products. However, in order to successfully access new knowledge through collaborations with firms and institutions, firms must manage the capability to search, find, access and interpret for their own use information embodied in external organisations (Forfás, 2005). In the last fifteen years, this aspect of learning has been targeted and widely studied in the literature on absorptive capacity. Starting from the seminal work of Cohen and Levinthal (1989, 1990), the literature on absorptive capacity has explored several dimensions of firms' technological capabilities, investigating the factors determining a firm's ability to access new knowledge. Although early empirical works on this issue have focused on large firms and on high tech industries, a growing interest has been shown for the context of MSMEs. In fact, despite MSMEs' limited R&D activity - which is generally considered in the literature as the core of absorptive capacity - MSMEs do network with external organisations, overcoming their often limited internal knowledge resources. Accordingly, in the case of MSMEs the arguments in support of R&D efforts as determinants of firms' ability to access new knowledge need to be revisited. In fact, in MSMEs alternative components of firms' learning processes such as learning by doing and learning

by using (Cooke and Morgan, 1998; Feldman, 1994; Maskell and Malmberg, 1999), very often expressed in a tacit form (Lundvall and Johnson, 1994; Von Hippel, 1994) assume a key role in developing knowledge and in generating absorptive capacity. Therefore, in order to determine MSMEs' capacity to absorb external knowledge, together with the capacity generated from in-house R&D activity that in many cases is carried out informally - one should consider learning capabilities embodied in their human resources (HR). The skills, training and experience of MSMEs' human capital represent the essence itself of their knowledge base and contribute extensively to the overall capability to absorb external knowledge.

Innovation studies have underlined the crucial role played by the interaction of different organisations in fostering the innovation process (Coombs et al., 1996; Dodgson and Rothwell, 1994; Von Hippel, 1988). Firms' innovation activity is enhanced, and sometimes depends upon, cooperation between firms and other organisations (Freeman, 1991, 1994) such as universities and research centres (Cohen et al., 2002; Jaffe, 1989), suppliers and users (Lundvall, 1988; Sako, 1994; Shaw, 1994) or even competitors (Coombs et al., 1996). In order to carry out innovative activities firms must accumulate and process internal and external knowledge, establishing learning processes based on different sources (Malecki, 1991; Stiglitz, 1987). Innovating firms actively seek and recombine different knowledge inputs originated by different sources whose flows rarely follow a linear process (Kline and Rosenberg, 1986). Firms can internalise knowledge sources or rely on



external transactions. However, between these two possible alternatives: "...external transactions may be preferred if knowledge sources are too costly, too specialised or somehow otherwise constrained from becoming a part of the firm" (Feldman, 1994). Both innovation (Nootboom, 1994, Dodgson and Rothwell, 1994) and regional studies (Cossentino et al., 1996; Garofoli, 1992; Maskell and Malmberg, 1999) conclude that MSMEs' success against larger competitors may be determined by their ability to utilise external networks efficiently. In general, MSMEs overcome barriers to growth due to absolute limits to resources by the astute use of alliances (Ahern, 1993; Nootboom, 1994; van Dijk et al., 1997) and development of collective efficiency (Schmitz, 1999). For the purpose of innovation links between actors inside the firm and the external environment are considered to be an asset especially for MSMEs (Nootboom, 1998). In fact, due to the nature of their operation and their size (Waalkens et al., 2004), MSMEs are less R&D driven and rely more on their external environment in undertaking innovation activity. Therefore, as also the literature on territorial systems suggests (Brusco, 1982; Piore and Sabel, 1984), a firm's competitiveness may in fact be determined more by its external network than its size (Mytelka, 1991).

Research Design and Method

The study is based on observation and personal interview in different aspects of the firms' innovation capability in energy efficiency and OHS. The time span of the study is from 7th September to 30th November 2015. Personal interviews are conducted in different

phases with owner/manager, supervisor, as well as workers. We primarily tried to identify the innovation, collaboration and learning about environment related to energy and occupational health and safety. Sixty MSMEs are covered in the study, which include Foundry units of Rajkot, Transformer units of Gwalior and Foundry and dyeing units of Indore. 60 entrepreneurs/managers are interviewed, 55 supervisors and 93 workers are interviewed in phase wise manner.

In Regional Cluster collaboration and collective learning among cluster members will lead to certain innovation. Here innovation means doing something new in terms of technology, idea or process in the firm level.

Innovative Measures in Energy Efficiency:

Innovation through sensitization of ideas relating Energy

Innovation through Energy Efficiency and Waste Management

Innovation by adopting Lean Management

Innovation through checking Energy loss

Innovative Measures in Occupational Health and Safety:

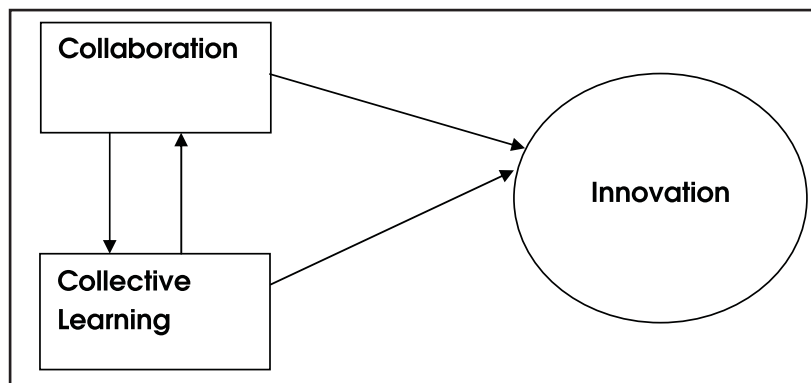
Innovation through sensitization of issues related to Occupational Health and Safety

Innovative safety Training

Innovation in First-Aid Training

Model Frame Work

Figure-1: Model frame work of innovation through collaboration and collective learning



Innovative ways to create awareness of health issues of workers

Analysis

For illustration we have collected process improvement measurement data from 68 owner/manager from foundry, transformer, as well as dyeing units. A detailed structured questionnaire covering the five statements is given to the executives of the purchasing department and production department to evaluate the 25 workers. These five variables are measured with a score from 0 to 100 in which the higher score is the higher performance. The performance of an individual process improvement effort can be measured by the ratio of the level of output produced by the process effort and the level of process effort. Here we have calculated the rank in both in Principal Component Analysis approach and Data Envelopment Analysis approach and compare the result obtained from

the both process.

The performance of the worker can be measured by all the ratios of output and input measurement data relevant to the process improvement programs of a worker.

The PCA ranking procedure is based on the ratios of individual inputs and outputs, and one more variable takes into account the overall performance of each worker as follows:

$$D_1 = Y1/X1, D_2 = Y1/X2, D_3 = Y2/X1, D_4 = Y2/X2, D_5 = Y3/X1, D_6 = Y3/X2, D_7 = \sum_{i=1}^6 D_i$$

Table - 2 gives the eigen value and eigen vector analysis of the correlation matrix of the above seven variables. We have four principal components, PC1, PC2, PC3 and PC4 (60.7%, 18.8%, 12.1% and 8.1%) accounts for 99.7%, of the total sample variance. The performance score of each worker is given in Table - 3



Table - 1: Classification of Inputs and Outputs

Inputs	Outputs
X ₁ : Quality of OHS and Energy related practices	Y ₁ : Quality of the OHS and Energy Efficiency (EE) related implementation
X ₂ : workers' training	Y ₂ : Actual benefits of implementation
	Y ₃ : Delivery level of workers

Table - 2: The eigen value and eigen vector analysis of the correlation matrix

Eigen Value	4.2409	1.3134	0.8504	0.5703	0.0118	0.005	0
Proportion	60.70%	18.80%	12.10%	8.10%	0.00%	0.00%	0.00%
Variable	PC1	PC2	PC3	PC4	PC5	PC6	PC7
D1	-0.302	0.523	-0.541	0.035	0.527	-0.12	-0.223
D2	-0.393	-0.235	-0.556	0.058	-0.646	0.083	-0.231
D3	-0.366	0.295	0.383	-0.577	-0.255	-0.444	-0.192
D4	-0.401	-0.405	0.153	-0.372	0.382	0.558	-0.236
D5	-0.31	0.463	0.425	0.522	-0.197	0.423	-0.136
D6	-0.359	-0.452	0.211	0.5	0.235	-0.539	-0.159
D7	-0.484	0.016	-0.055	-0.031	0.023	0.012	0.872

Table - 3: Performance Score of Workers

Worker	Performance Score	Rank
W-16	60.868	1
W-15	49.699	2
W-2	48.887	3
W-18	48.015	4
W-8	47.774	5
W-11	45.41	6
W-23	45.257	7
W-9	44.527	8
W-17	43.91	9
W-14	43.817	10
W-4	43.346	11
W-7	42.873	12
W-22	41.304	13
W-10	39.798	14
W-19	39.087	15
W-24	37.504	16
W-13	36.5	17
W-25	34.025	18
W-12	33.898	19
W-5	33.255	20

Worker	Performance Score	Rank
W-20	32.153	21
W-21	30.837	22
W-6	26.461	23
W-1	26.101	24
W-3	18.908	25

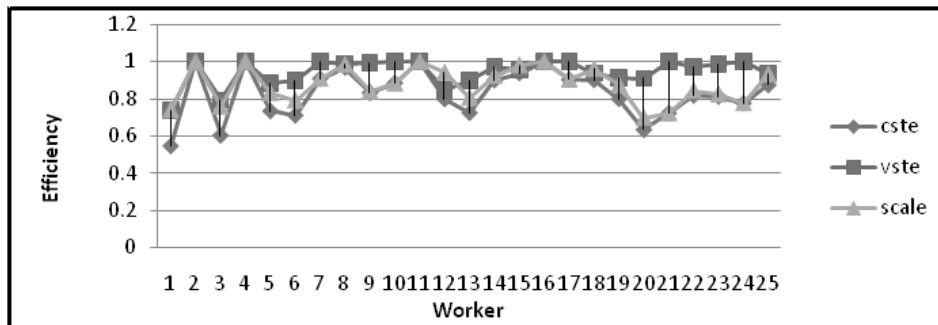
Result & Discussion

When a company attempts to improve the performance of Occupational and Health and Safety related issues as well as energy conservation, it is crucial for them to understand the quality of the workers. The continuous improvement itself is a dynamic process of the worker chain network. When multiple dimensions are simultaneously considered in evaluating the overall competence of a worker, the performance score of each worker can be obtained by the PCA method and DEA approach. The average technical efficiency score obtained through CRS model is 0.830 and the average efficiency score obtained through VRS model is 0.944 which is higher than the CRS score. Worker with high performance scores are likely to have high level of capabilities, and are better candidates for inclusion in an optimized base of operation. So improvement in the quality of all processes reduces costs and improves the level of quality in term of health and safety issue of workers as well as energy efficiency measures.

The opinion of firm's owner/ manager is very constructive regarding the energy efficiency measures. They are always in



Figure-2: Efficiency Scores of Workers



search of collaboration with other MSMEs not only to follow the practices of collaborating firm but also to have a clear understanding of the peer members for better practices. Some entrepreneurs also interested in adopting new methods and technology through collective learning. It has been seen that small change in the process will lead to save time as well as money. The approach of collaboration starts from the cluster level with continuous interaction related to energy efficiency measures and OHS. The occupational health and safety issue of workers are more confined to the awareness level in individual level. It has seen that Occupational Health and Safety is an important aspect for the betterment of organizational efficiency. Most of the MSMEs entrepreneurs are also thinking about the OHS issues of workers through collaboration of, government as well as other non-government organization.

Conclusion

Innovation through collaboration and collective learning is evident from the practice of enterprises. In the process of collective learning the work culture

become prominent as implementation change. The innovation in the enterprise level is not always radical type of innovation but it can be visible through its operation. In foundry units checking the dust particles is a challenge. Therefore innovation is required for minimizing the pollution through tacit knowledge management that leads to innovation. In case of energy related intervention waste management is a challenge for dyeing and transformer cluster. Hence innovative approach is the key to tackle these issues. It is evident from our study that collective learning among the enterprises is the only tool to solve the problem related to Health and Safety.

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Smart Marketing - A Way out of Smallness of MSMEs

Abstract

MSME sector in India plays a significant role in the economy, however it suffers from various grave challenges and marketing is one of them. While individually MSMEs find it difficult to resolve them, smart strategies through collective actions can play vital role in this direction. However, despite 60 years of planned growth, conscious policy and promotional support by the Government of India, the problems remain unsolved. This paper attempts to analyse various marketing challenges, needs and opportunities faced by the MSME sector and suggest way forward to the policy support system to ensure that all the gaps for marketing bridged where enterprises can come together to undertake new and smart measures such as common brand development and hiring of strategic marketing consultants and exploring new markets, etc. The paper also captures learning from some of the successful practices of competitiveness through innovative collaborative marketing models by Indian industrial clusters and suggests the role of policy to upscale them.

Key Words

Micro Small and Medium enterprises (MSMEs), Marketing, Branding, Cluster

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Introduction

Recognised as the growth engine of the country, the manufacturing sector Micro Small and Medium enterprises (MSMEs) contribute 7.04% and the services sector MSMEs contribute 30.50% of the GDP (Ministry of Statistics and Programme Implementation, 2012-13) and 42.38% of the total export (Ministry of Commerce and Industry, 2013-14), produces more than 8000 quality products for the Indian and international markets and caters to various sectors like: Food Processing, Pharmaceuticals, Textile & Garments, IT, Agro and Service sectors.

Over the past 60 years of planned growth, conscious policy and promotional support has been given by the Government of India to trigger the growth of the sector. In 12th Five Year Plan of Government of India has also given special focus on development and promotion of MSMEs and have allocated funds for making MSMEs competitive and progressive. However, the sector is still facing lot of challenges.

Marketing is one of the biggest challenges one comes across in MSME sector. Small entrepreneurs- whether home based or organised, very often face difficulties in marketing their



produce. Unsold stocks across the value chain, lack of access to the potential market, overdependence on one stream of market and their fluctuating fate with that of their principal customers are some of the commonly surfaced problems faced by the MSMEs. Sometimes it is merely a case of linkages being absent. Export markets for exportable products usually fall in to this category. Though entrepreneurs have a marketable product in export markets, they do not know whom to get in touch with and are not aware of detailed procedures and involved processes. Sometimes 'lack of market' is a result of limited opportunities because of lack of scale in marketing. Thus entrepreneurs may not have an entire range of products to offer to customers or may have very limited quantities to sell in one lot.

Marketing is the key area that requires to be addressed to make MSMEs survive the onslaught of heavy competition posed by opening up of trade barriers/ trade liberalisation where big industries having price, design and technology advantages are capturing the markets whereas MSMEs are crippling down due to various internal inefficiencies like improper systems of timely production, quality inconsistency and lack of any sort of marketing tools to attract institutional buying arrangements from established retail chains and also due external factors including non-availability of marketing assistance.

Unlike artisan and micro enterprises producing primarily the final consumer products, in most of the industrial clusters producing intermediary products serve as suppliers to bigger units. Here one of the common

drawbacks is their inability to meet the large requirements of big firms due to inadequate production capacities. Various other reasons like lack of awareness of quality standards, product and design variability, lack of innovations in designs, etc. contribute to the urgent need to address the issue of marketing in the sector.

Marketing Needs and Challenges

a) Volumes to cater markets

Many MSMEs suffer from lack of market primarily because of lack of scale in marketing. They do not have volumes to cater big orders from large firms or institutional buyers, therefore end up being dependent on small buyers or marketing intermediaries like traders, and get low profit margins.

Though, Public Procurement Policy for Micro and Small Enterprises (MSEs), order 2012 issued by Ministry of MSME, Govt. of India encourages participation of MSEs in Government tenders, but still it has its own limitation in terms of making MSEs eligible for the bidding process. According to this policy, Government should procure at least 20% of total tendered value from micro and small entrepreneurs (MSEs) out of which 4% of should be from MSE owned by SC/ST. However, executing the policy is a difficult task given limited individual production and delivery capacity of MSEs and lack of aggregation models in most of the clusters. Given the marketing challenges and lack of effective collaborative models, there is a need to critically evaluate the pros and cons of various existing models and come out with an appropriate model that can solve the problem. However, there are

few successful cases where MSMEs with support of development agencies/ industry stakeholders, have been able to reach out to larger buyers through collective marketing initiatives. Such successful initiative can be seen in Rourkela General Engineering cluster. (see case study-1)

Case Study-1

Pooling Capacities Together: Way to

M/s. Rourkela Mechanical Consortium (RMC), a consortium of five small firms could receive and executed work orders worth Rs.15 lakhs in just 30 days. No wonder business turnover of all the five units of the RMC has multiplied manifold. Today each one of the member firms undertakes orders worth more than Rs.50 lakhs annually against their earlier annual turnovers of about Rs.10 lakhs reported by UNIDO in 2008.

These small units of the Rourkela Engineering Cluster were mainly involved in machining jobs of the Rourkela Steel Plant (RSP) and other Tier-I units. Limited market exposure and overdependence on a few customers were diagnosed as the main reasons for lack of orders. The units have been facing numerous problems beginning from the procurement of big orders to realization of bills from the RSP. Moreover, they seemed to lack enough confidence to undertake big orders from other private organizations, though such opportunities were visible to one and all. They feared that they may not be able to deliver such big orders on time. However, five of these units came forward to work as one

group and hired a consultant to assist in forming a partnership company by the name RMC with an initial seed capital of Re.1 lakh. A profile of RMC was also prepared mentioning the combined capacity of RMC members and was propagated to all potential customers. The members preferred low cost advertising like sending individual mailers to all the units outside Rourkela. RMC was further assisted in conducting business promotion meetings with some of the bigger customers like Vedanta, Bhushan Steel and SEPCO. Some of the new customers were invited to visit their facilities. Soon, RMC was registered as vendor to SEPCO and M/S. Schenck Process India Ltd, Ranchi. After tasting success, gradually the confidence of the members grew and soon RMC established an office of its own and also got enlisted with large Cement plants. Within nine months it was able to execute orders worth Rs.30.5 lakhs.

b) Market Linkage

Poor market linkage is another reason of poor performance of MSMEs. In the absence of such a channel the units resort to selling of their products through traders in an unorganized market at much lower prices. To overcome this, retail chain linkages have been tried in Ganjam cashew cluster benefiting to increased profit margins of 25 units. (See case study-2). Similarly, such initiative has also been tried in Pune by giving retail chain linkages training to the micro firms in collaboration with local SHGs which has resulted in creation of 50 new linkages by 9 firms with retail outlets in Pune, Mumbai, Bangalore and Hyderabad. The turnover of these 9 firms increased by 10%.



Case Study: 2

Value Chain Linkage in Ganjam Cashew Cluster

In the Ganjam Cashew Cluster, (consisting of 160 units and an annual turnover of Rs.240 crores) value chain linkage was created in the year 2011 with OLAM, a food retail chain and 40 MSMEs in the cluster with nearly 105 MT of cashew kernels worth Rs.4.2 crores started supplying. Identifying the need for creating better marketing practices in the cluster, the cluster development project implemented by Access Development Services arranged an exposure visit for a group of 38 firms to Mangalore and Kollam. During the visit the management of a retail chain called OLAM met the team from Ganjam and discussed marketing issues faced by them. On returning to Ganjam, the project facilitated the visit of the officials of OLAM to cluster so that they can interact further with the potential units directly. The project had also introduced a new mini processing technology (steam boiling) which enhanced the production capacity of units from 5 bags to 8-10 bags. On understanding the potential of the cluster OLAM opened a procurement house within the cluster enabling ease of access to local units. The cluster is set to make large strides in the coming year with an expected business of Rs.10 crore from OLAM alone. Also being linked to a national retail chain the units have now started various effective financial and managerial practices like book keeping, billing practices, and also occupational health and safety of workers. These practices in turn has also helped them in providing easier access to finance and expand the marketing

channels.

High cost involved in market exploration is another cause of marketing bottleneck in many MSMEs. However, this can be solved through common hiring of BDS/ marketing consultants for market study, new market exploration, etc. as done by Kolkata leather goods manufacturers (see case study -3)

Case study-3

Kolkata Leather Products go to Japan

With the current exports largely oriented towards the European (56%) and American (15%) markets, the units of the Kolkata Leather Cluster have taken a significant step towards entering an entirely new export destination: Japan with the help of Entrepreneurship Development Institute of India (EDII) during a BDS market development project of SIDBI. The units participated in a design training program conducted by a faculty from an international design institute in Italy (who was linked during a leather fair in Italy, MIPEL under BDS implementation project by SIDBI in 2010). The faculty was requested to provide a few modules of training based on the existing trends in Japan. A common brochure was developed. The delegation from Kolkata to Tokyo participated in an International Fashion Fair, Tokyo, visited the local leather products market and took part in an Interactive Meet with select potential importers / buyers of leather products in Japan. During the visit a number of linkages were created and an international BDS/ marketing consultants for market study, new market exploration, etc. as done by Kolkata leather goods manufacturers (see case study -3)

strategy. The BDSP also provided a few linkages that proved fruitful. These initiatives together led to transactions worth Rs. 2 million in terms of samples. Following this orders worth Rs.1.5 million were executed within a year, opening a new avenue to be expanded into for the entire leather cluster of Kolkata.

c) Market Intelligence

Lack of awareness on new markets

Lack of awareness about potential market, information about potential clientele, their choices and preference are some of the common problems faced by the MSMEs. Though entrepreneurs have a marketable product, they do not know whom to get in touch with and are not aware of detailed procedures and involved processes. However, there are cases like Rajkot Engineering and Barpali Handloom where through project support new markets have been developed by creating market intelligence among the entrepreneurs. (See case study-4 and 5)

Case Study- 4

Rajkot Engineering units go International

The predominantly domestic market oriented SMEs of the Rajkot engineering clustered executed orders export worth Rs.2.9 crores through the participation in a trade fair in 2012.

The pump and motor sector in Rajkot Engineering Cluster predominantly cater to the local market, specifically to the agricultural and to an extent to industrial sectors. Of the 160 units in the

cluster, nearly 120 market their product in the domestic market only.

The BDS project implemented by SIDBI identified the need for the cluster to explore international markets as well. Consequently, 2 BDSPs were introduced in the cluster who explained the export related processes to the SME. Following this 20 units were provided assistance to participate in the Rajkot Machine Tools show where spot orders worth Rs.2 crores were generated. Following this more orders worth Rs.90 lakhs were facilitated to Europe, Middle East and Africa within couple of months of the initiative. The units have now realised the potential of the international market. This has resulted in 60 foundries visiting the GIFA, trade fair in Germany on their own initiative.

Case Study- 5

Barpalli Ikat - Its Journey to National Markets

The passion to create enhanced, contemporary and innovative handloom products by Master Weavers (MWs) in Barpalli Ikat Handloom cluster had to find a way to markets. Deeper study of the cluster by UNIDO in 2006 helped identify several such MWs who were keen to upgrade themselves on designs and reach out to National markets. The product range in the Barpalli Cluster had been traditionally limited to saris and ladies dress material, that too with limited designs. The limited design, colour and product ranges were mainly due to lack of exposure of the weavers to current market requirements. A Self Help Group (SHG) of 11 small Master Weavers from Barpalli in Dec



2006 was formed. Ananta Narayan group, as this group came to be called, had small MWs as members having 4-10 looms each. They were largely operating in the local market with no exposure to national markets and very limited knowledge about the current trends of demand in the national markets. This group of MWs went to Kolkata for participation in "Artisana" exhibition organised by Crafts Council. Although they received a modest response for their products, their participation in the exhibition helped them learn about the marketability of their product. They realized the need to modify the designs and colour base of their products as per market need. Using these samples the MW group participated in several other exhibitions in cities like Pune, Delhi, and Bangalore and received a good response. This designer also linked the group to Dastakar, a leading organization in Handloom sector in India. With the exposures and better understanding of the need of market, the group has able to get various national as well as export linkage on its own. The immediate outcome of which can be seen through their increased in number of number of looms by 8-9 per master weaver by end of 2008 which has increased to more than 20 looms per MW in 2015.

d) Product Innovation and Coping-up Strategy

Various unforeseen marketing threats impact the performance of MSMEs. Market recession, competition from cheaper substitution, limited product innovation, growing competition from other manufacturers are some of the example of such threats.

Export market slump is the most critical factors that led to poor performance and employment loss in several clusters during last decade. In Tirupur Knitwear cluster, owing to the slump in global economy during 2008-10, there had been a low volume of export orders. Moreover, units have lost market share due to closure of dyeing units for more than 11 months. This has resulted in fall in employment. Market had been good for Chennai Auto Component until 2007. In 2008-10, there was drastic reduction in turnover due to recession as a result of which 30-35 percent of workers at the trainee/unskilled/semiskilled levels lost their jobs. On a similar note, Ludhiana Knitwear cluster experienced reduced turnover and fall in employment. Dumping of Chinese products and tax free imports from Bangladesh rather enhanced the problem. Firozabad Glass cluster exports around 50 percent of its product. The cluster was badly hit by recession in 2009 because of which exports fell by 40 percent leading to a fall in employment by 2.5 lakhs.

Recession led to closure of units in Firozabad which is known for its glass products -bangles, lamp sheds, vases and chandeliers, tubes and rods, etc. The cluster was badly hit by recession in 2009 for which exports fell down by 40 percent. 4000 traders left their trade and 450 glass workshops reduced to 275. Employment reduced from 4 lakhs to 1.5 lakhs. Asansol Refractory Brick cluster was also hit by market slump and growing competition from other units.

Murshidabad Handloom cluster is facing competition from other substitutes and also low cost power loom products. Also, over dependency on traders is

squeezing their profit margins and making them less competitive. This has led to joblessness in the cluster. Chunar Pottery cluster is facing a similar problem due to availability of other ostensibly better quality and cheaper substitutes like plastic and glass products. In addition, the cluster has a limited range of products and is highly dependent on festivals like Deepawali and Janamash-tami. They have annual business cycle. Limited market and low demand has led to closure of units and large scale unemployment. The families currently doing the business are not able to get the profit margin if they solely depend on pottery business. So, they have taken up farming as the major occupation and pottery as an optional one.

Lack of market knowledge and lack of product diversification to cater to new markets has limited the growth of micro units in Kolkata Leather cluster. Additionally, there is growing competi-tions from other manufacturers who produce better quality and low priced products because of use of machines. This is another threat to the units which is likely to cause jobless growth in the cluster. Similarly, the Ranaghat Gold and Silver Jewellery cluster is facing market problems due to lack of design diversification and innovation into light weight jewellery to match the current market trends.

The traders and buyers of Amroha Textiles Waste cluster have now opened their own production units in marketing zones of Varanasi and Panipat and reduced their procurement from Amroha. This has impacted the growth of the cluster and likely to impact employment negatively in near future. Similarly, unhealthy competition among

units to get orders is bringing down the profit margins in Thrissur Gold Ornament cluster.

Existence of strong local market for Ikat is the main reason for the growth of Bargarh Handloom cluster. Moreover, demand in national and international market for Ikat is growing and with lot of interventions by the textile department and Sambalpuri Basralaya, weavers are now being able to reach out to right kind of market. Weavers without having alternative market channels and due to lack of working capital were forced to sell their product at lower price. However, gradual opening up of alternative marketing channels and also with credit linkages by financial institutions, the distress sale has significant decreased in last 5 years. Income of the skilled weavers has increased atleast by 100-120 percent in last 5 years.

In Ahmedabad Apparel cluster, ensured payment due to the Adats (a class of local traders), who buy the products from the units and ensure payment has positively impacted growth of the cluster has increased market security for micro units.

In Chanderi Handloom cluster, despite huge competition from power loom products the cluster has been able to stay competitive because of proper market strategy - specialization and linkages with big retail chains.

Case Study- 7

From Industrial to Fashionable gloves

A network of 6 units in Kolkata Leather Cluster have expanded their product



range, moving from low end industrial gloves to high end, value added fashion gloves. Though these units together had formed a private consortium called United Creations Pvt. Ltd and identified the scope for such a value added product. There was a need for a design BDSP to train the local designers with respect to the technicalities in production. The units identified and facilitated in bringing an International BDSP, Mr Werner Morbach from Germany to conduct a training program for a period of 3 months to help 50 designers learn the production of the fashion gloves. Following the training, samples were sent to a buyer in Germany through the BDSP and also through unit's initiatives to buyers in Holland and Spain. The cost of BDSP, the training and sample development was borne collectively by all participating units.

The increase in price due to value addition was substantial i.e. price per pair of industrial gloves was \$1.2 but for the high-end fashion gloves, the price was \$6-\$7. This increase is due to the increased quality, superior skill and craftsmanship involved in manufacture. Though initial samples had quality related problems the units have since overcome them and have executed orders worth of more Rs.1.4 Crore within a year of the initiative. Following the successful entry of the 6 units into the fashion gloves market it is expected that in a short period of time more units will begin manufacturing them, setting the trend for the introduction of a brand new line of products in the cluster.

e) Market Promotion and Branding

a) Effective marketing/ communication channels/ product display centre

Proper marketing strategy is another critical factor influencing growth of the cluster. Many artisan and service cluster like tourism clusters are not being able to attract customers because of improper marketing strategy and limited product range. Most of the artisans in Domjur Gems and Jewellery do job work and the market is largely controlled by traders/ showroom owners. Entrepreneurs do not have any other market channel or direct access to the consumer and therefore earn little margins. However a near similar situation has been handled through better marketing strategy by the association in Shantiniketan leather craft cluster. Bargarh handloom cluster has also experienced positive growth due to various market interventions under different support programs and because of the presence of a strong local market

Product designs and quality has improved significantly by the artisans in last 4/5 years in Shantiniketan leather craft cluster. Moreover due to the Geographic Indication (GI) received by the Association, the craft has got greater visibility in outside market. This has helped in positioning "Shanti Craft" as traditional craft and attracts more number of buyers. The micro units and the artisans who are producing better products and designs have mentioned that their turnover has gone up by 40-50 percent in last 4-5 years.

b) Cluster Branding

Initiatives in promoting marketing are imperative for all clusters and for those that have attained sufficient levels of maturity, the scope of branding will serve as a unique tool. The creation of cluster brand is extremely pertinent as it can help a cluster access new, niche and higher end market segments where the products can be sold at a premium price. Catering to higher quality clientele entails rigorous maintenance of quality standards of the product. Such a cluster would have better access to public funds for furthering the development cause by leveraging its brand value and improved public awareness.

Branding is highly perceived and commonly used tool by large firms to create demand for their products and get premium prices. Large businesses are often capital and resource rich, they usually have greater numbers of employees, they can spend more for R&D, design innovation, advertising on product, etc. and therefore, they enjoy stronger brand recognition. However, it has lesser applicability to MSMEs who have basic competitiveness and marketing related issues. But despite this, MSMEs can even compete with big brands dominated markets by virtue of their own set of advantages with good preparation and determination and by getting their approach right. Moreover, in order to be an internationally competitive cluster, it is necessary to be able to attract external interest and resources such as skilled people and capital.

The most important strength/ advan-

tage that can be leveraged, is the agglomeration or geographical concentrations of these MSMEs. Some of the clusters have recognized its importance and using their geographical location as their brand informally but still a formal cluster specific branding is lacking. Government institutions have also put in lot of efforts in cluster development and market promotion but not much has been done to brand the clusters and consequentially create sustainable market linkages.

Case Study- 8

Khushboo Gujarat ki

Tourist areas in Gujarat like Kutch and Dwarka, Somnath and Gir National Park have seen an increase in tourist footfalls over the past few years, especially since the state roped in Amitabh Bachchan, the Bollywood icon and brand ambassador of Gujarat Tourism to do the brand endorsement. His endorsement through movie clips broadcasted in leading TV channels in India and abroad has created tremendous impact on viewers. As a result, these places have seen an increase in tourist arrivals, including a 30 percent rise in foreign travellers reported by the Tourism Department in 2012. In 2006-07, the figure stood at 1.27 lakh, which increased to 1.70 lakh in 2009-10. In 2010-11, nearly two lakh tourists arrived. Gujarat tourism has grown and now it stands on fifth spot among states in India, after Rajasthan, Kerala, Maharashtra and Goa. Progressive campaigning and creation of support infrastructure by the Government has made Gujarat a known tourist destination. (NDTV)



Analysis of Public Support Schemes for Market Promotion

If we dig deeper into the marketing challenges, we may come across other related issues like design, quality, packaging, etc., but the present note limits itself only to the direct sales and marketing related problems that can be solved through collective actions. It is envisaged that the analysis will help understand the criticality of the problems and the support systems available to overcome the same, and with this, the unsolved problems can be highlighted and the appropriate policy support can be thought of.

Collaborative Actions as Means: While individually MSMEs find it difficult to resolve their marketing challenges, collective actions through collaborative approaches (viz. - associations, consortia, cooperatives, Self Help Groups, etc.) can play a vital role in addressing the issues. Activity driven by collaborative approach has a higher probability of success for a number of reasons.

- i. Aggregation of the products to cater big orders from large firms as well as institutional buyers;
- ii. Creating appropriate value chain linkages and effective marketing channels. This is especially required for micro enterprises where a formal marketing route is normally absent. In the absence of such a channel the units resort to selling of their products through traders in an unorganized market at much lower prices.

- iii. Able to quote competitive prices because of increased transaction volumes and reduced cost of marketing;
- iv. Become eligible for participating in high value/ volume bids through collective production capacity;
- v. Stepping into new markets through joint exploration/ market study followed by creating right product/design and then doing test marketing;
- vi. Hiring quality Business Development Service Providers (BDSPs) for various marketing initiatives;
- vii. Creating common soft and hard marketing infrastructure. Soft infrastructure may include web-portals, e-catalogues/ brochures, on-line marketing systems, etc. and hard infrastructure may include stock room, showrooms, design centres, quality check systems, etc.
- viii. Creating demand for the product and establish customers loyalty through creating common branding and brand enforcement strategies;
- ix. Low risk involved in all the above initiatives because the risk is shared equally among all members which in turn make all participating members equally responsible towards the activity

Findings

Analysis of the available public support

Challenges/ Needs		Possible Solutions	Schemes/ Support
I. Supply Capacity	a) Insufficient volume to cater to markets	Aggregation of volume and joint marketing	NIL
	b) No product storage facility to cater immediate requirements/ short notice orders	Common storage facilities	1. AHVY for Handicrafts 2. Market Access Initiatives (MAI) Scheme (Ministry of Commerce and Industry)
II. Market Linkage	a) Need for market expansion but high cost involved in market exploration	Joint visit for market exploration through sharing the travel and product development cost	1.MSE-CDP (MoMSME) 2.MSME-MDA (MoMSME) 3.International Cooperation Scheme (MoMSME) 4.Market Support & Services Scheme 5. AHVY (DC Handicraft) 6.SUDHA (NABARD) 7. Market Access Initiatives (MAI) Scheme (Ministry of Commerce and Industry)
		Common hiring of marketing consultant for market linkage creation	1.MAHIMA (NABARD) for MEs only 2.SUDHA (NABARD) for MEs only 3. No scheme/ support for industries
			1.International Cooperation Scheme (MoMSME) 2.Marketing Assistance Scheme (MoMSME, implemented by NSIC)

Contd.:



Challenges/ Needs	Possible Solutions	Schemes/ Support
<p>II. Market Linkage</p>	<p>New market exploration through organizing buyer-seller meet (BSM)</p>	<p>3. Market Support & Services Scheme (DC-Handicraft) 4. Market Development Assistance Scheme (Ministry of Commerce and Industry) 5. Market Access Initiatives (MAI) Scheme (Ministry of Commerce and Industry)</p>
<p>b) Poor linkage with large buyers</p>	<p>Participation in exhibitions/ trade fairs (both domestic and international)</p>	<p>1. International Cooperation Scheme (MoMSME) 2. Marketing Assistance Scheme 3. Market Support & Services Scheme (MoMSME) 4. Marketing Assistance and Technology Up-gradation in MSMEs (MoMSME) 5. MSE-CDP (MoMSME) 6. Market Development Assistance Scheme (Ministry of Commerce and Industry) 7. Market Access Initiatives (MAI) Scheme (Ministry of Commerce and Industry)</p>

Contd..

Challenges/ Needs		Possible Solutions	Schemes/ Support
III. Market Intelligence	a) Lack of awareness on new markets	Joint market research	1. Market Support & Services Scheme (DC-Handicrafts) 2. MSE-GDP (MoMSME) 3. Research & Development Scheme (DC-Handicrafts) 4. AHVY for Handicrafts 5. Market Access Initiatives (MAI) Scheme (Ministry of Commerce and Industry) 6. Market Development Assistance Scheme (Ministry of Commerce and Industry)
		E-marketing: Linking with existing e-marketing portals, creation of new marketing portals	1. Market Support & Services Scheme (DC-Handicrafts) 2. AHVY
IV. Market Promotion/ Positioning	a) Effective marketing/ communication channels	Common product brochures, catalogues, directory of producers with their detailed profiles including product and communication details	1. Market Support & Services Scheme (DC-Handicrafts) 2. AHVY for Handicraft 3. International Cooperation Scheme (exhibitions) 4. SUDHA (NABARD) for MEs 5. MSE-GDP (MoMSME) 6. Market Development Assistance Scheme (Ministry of Commerce and Industry)

Contd.:

Challenges/ Needs		Possible Solutions	Schemes/ Support
IV. Market Promotion/ Positioning			7. Market Access Initiatives (MAI) Scheme (Ministry of Commerce and Industry)
	b) No product display centre	Permanent common facility for display	1. Market Support & Services Scheme 2. AHVY 3. MSE-GDP
	c) Non recognition of MSME brands	Joint branding and brand promotion	4. Market Access Initiatives (MAI) Scheme (Ministry of Commerce and Industry) 1. Building Awareness on IPRs for MSMEs (MoMSME) 2. Marketing Assistance and Technology Up-gradation in MSMEs 3. SUDHA (NABARD)
V. Market Plus Services	a) Non viability of add-on services like-i) after sales services; ii) home/ door step delivery systems	Multi-enterprise service system (through either outsourcing it to other service providers or through partnership). Providing self training module/ tips on how to use/ handle the product.	1. Transport Subsidy Scheme
			NIL

schemes for marketing support brought out the following findings.

- **Supply Capacity:** There is no scheme to encourage product aggregation to cater markets, especially the big orders. Though Public Procurement Policy for Micro and Small Enterprises (MSEs), order 2012 issued by Ministry of MSME, Govt. of India encourages participation of MSEs in Government tenders, but still it has its own limitation in terms of making MSEs eligible for the bidding process. According to this policy, Government should procure at least 20% of total tendered value from micro and small entrepreneurs (MSEs) out of which 4% of should be from MSE owned by SC/ST. However, executing the policy is a difficult task given limited individual production and delivery capacity of MSEs and lack of aggregation models in most of the clusters. Given the marketing challenges and lack of effective collaborative models, there is a need to critically evaluate the pros and cons of various existing models and come out with an appropriate model that can solve the problem. Support is required for demonstrating such joint marketing/ bidding to educate and encourage MSMEs to explore big orders/ enter into institutional buying arrangements, etc. Such support could be developmental in nature.
- **Market Linkage:** While Micro, Small & Medium- Cluster Development Programme (MSE-CDP) scheme supports joint visit for market exploration, but there is no scheme

for common hiring of marketing consultant for linkage creation. The nature of this activity is quasi-commercial when it is a first trial and therefore some developmental support should be provisioned to encourage MSMEs hire quality/ experienced consultants for various marketing related activities, but when it becomes repeat service, then, it is a pure commercial activity and therefore support could be reduced.

- **Market Intelligence:** There are schemes available for joint market study and research; however, none of the schemes ensure execution of the findings/ recommendation of such studies. Standalone study will not solve the purpose of lack of market intelligence/ information unless follow up actions have been taken to ensure implementation of the findings.
- **Market Promotion/ Positioning/ Branding:** While there are schemes available for handicraft products, no scheme is available to support industrial products. MSE-CDP talks about common product brochures / catalogues, but it is silent on e-marketing, cluster based brand building, brand positioning, advertising, etc. There is no comprehensive marketing policy which would cover development of branding either for an individual unit or for collective cluster based branding. Market development through various promotional and brand building activities is the most critical area that need to be tackled by the policy.



Handloom Mark is the only initiative by the Government purported to be developed as a brand, but has not been able to succeed due and the mark is being sold at a marginal price of Rs.25/ per mark to be put on the products of the societies which have been recognised by the Government as a confirmation of the product to be "handloom" and not "powerloom". Handloom Mark was launched to promote handloom as a brand which ended up as only selling of labels.

- **Market-plus Services:** Buying a product itself is not sufficient for the customer; they tend to look forward to other value added services like after sales services, doorstep delivery, online payment systems, etc. After sales services is more pertinent to industrial and high tech products. MSMEs find it difficult to offer such services given their low volume business. Collaborative model can play an important role here. MSME group or network can collaborate with the service providers at selected urban centres and subcontract such value added job to them. Door step delivery of the product can also be tackled in a similar way. However, there is no scheme and support services available for these value added services.

Conclusions and Way Forward

All the above five components are critical for MSMEs to resolve their marketing challenges. Schemes are available to tackle a few problems, but majority remain untouched. Moreover packaging of the schemes to address

the problem in a systematic way is missing. Some of the schemes can complement each other to realize better outcomes. For example, market study and trade fair participation or exposure visit can be packaged together. While the market study will tell the market to be focused along with need and preference of the customers, the trade fair participation/ exposure visit will give the scope of interaction with the customers directly. It will help them offer right kind of products to right market.

Moreover, the schemes are offering financial support to the entrepreneur and that to a maximum of 80% for the purposes of participating in exhibitions and trade fairs towards stall fees, travel etc. This is a sales promotion activity for a limited period of time requiring a part funding from the entrepreneur. There are various other schemes available on training for the entrepreneur or the cluster members in marketing and other functional areas of management, support conducting market studies, popularising the adoption of bar coding on, various other awareness programmes, exposure visits, participation in seminars, workshops and training programmes on technology upgradation, marketing etc. All these and other schemes are pertaining only to Marketing and Sales Promotion.

Further there are multiple agencies involved in the execution and implementation of the schemes belonging to both Central and the State Government. However, there is a general lack of awareness amongst the MSME about the various schemes that are being offered by the agencies. For example, various government agencies that are

involved in the development and promotion of handlooms at the centre and state level viz.- Handloom Export Promotion Council; Handloom and Handicrafts Export Council; Weavers Service Centre; National Handloom Development Council; Textiles Committee; State Autonomous Bodies on Handloom Sector Development; District Handloom Training Centres, etc. While all these agencies individually have supported the development of handlooms through specific schemes there is no focused attempt to address problems through complementing each other offering/ support to realise better outcomes. Moreover there is no policy for brand development in clusters.

There is thus a need to assess all the development schemes of various ministries of Govt. of India and allied institutions to ensure that all the gaps for marketing bridged where enterprises can come together to undertake new measures such as common brand development. On the other hand, those schemes that are duplicating in select areas, the same may either be merged or disbanded. Finally the schemes that

are functional but have scope for strengthening should also be undertaken through a policy review. These measures will go a long way in improving marketing focus among MSMEs.

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SME Exchange - Quenching the Finance Thirst of SMEs

Abstract

SMEs around the world are proving important catalyst in economic development and financial inclusion. But SMEs are facing many hurdles in its growth. Among all hurdles, getting finance are the most serious constraints on growth of SME's. This finance hurdle can be removed through equity financing through capital market's exchange platform.

This study reviews the past attempts to form SMEs exchanges in India, presented along with the reason for the failure and current status of new Indian SMEs exchanges. The attempt has been made to explain the current market microstructure of Indian SMEs in brief and final part provides the suggestion for Indian SMEs exchange for its transformational growth.

Key Words

Small and Medium Enterprises, Capital Markets, Stock Exchange, Market Micro Structure, Equity Finance.

Mohd Merajuddin Inamdar

In global economies, small and medium-sized enterprises (SMEs)¹ play a crucial role in sustainable development, employment generation and long term economic growth. SMEs are proving as one of the strongest drivers of world economy. Substantial amount of research has been done on the role of SME as driving force in economic growth and employment generation. It is estimated that 95% of world SMEs, are accounting around 60% of private sector employment (Ayyagari, 2011)¹.

There are many obstacle have been evaluate in many studies which hinders the growth of SME enterprises, some important and common factors are sub optimal scale of operation, technonological obsolescence and non availability of institutional finance. However, Ayyagari, Demirgüç-Kunt, and Maksimovic (2008)ⁱⁱ showed that not all these obstacles were equally constraining and that financing obstacles were the

¹ There is no standard definition of SMEs. It varies not only among countries but also vary as per different segment or departments within a country. The criteria commonly used around the world to defined SMEs as per the number of employees, sales turnover or total assets. In World Bank enterprise survey, 46 countries defined SMEs who employee less than 250(World Bank White Paper, "Facilitating SME financing through improved credit rating"). In India as per MSMED Act 2006, MSME defined as per limit of investment in plant and machinery. Those enterprises whose investment between 25 Lakhs to 10 cr rupees in plant and machinery are called SMEs, and below 25Lakhs rupees investment termed as micro enterprises. (Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006)

most robust constraints on growth. (Beck, 2005)ⁱⁱⁱ showed that financing obstacles had a significant impact on firm growth and that the smallest firms were most adversely affected.

There are many finance sources available to SMEs with the limitations. The sources are Internal finance by promoters own fund, Bank finance, Trade credit, Equity finance, Bond finance and Informal finance. In many countries, development banks institution also provide finance to SMEs. But as compare to number of SMEs the availability of fund is not sufficient. In India after banking finance large part of finance to SMEs is still come from the Non-banking financial corporation and informal finance, but which is inherently costly source of finance (Banerjee, 2006)^{iv}.

Basel II standards for banks which are based on risk based capital requirement adversely effected bank lending to SME (Berger 2006)^v. This trend is being strengthened by the Basel III Accord, which force banks to retain more capital than previously, which in turn is causing them to be more critical when providing loans. Basel III mandates banks for minimum risk based capital to arrange with them till March 2019 which might have adverse impact on SME bank lending and it become more costly and difficult to get for SMEs.

From the above literature study it is evident that bank finance to SME's is limited so there is need for equity finance to SME's, that are help them grow. To meet this need, globally the traditional capital market have been experimenting and providing alternative platforms dedicated to meet the

equity finance need of SME's in the form of exclusive SME's exchanges.

Learning from Past

In India in past we did two effort in form of OTCEI and IndoNext.

OTCEI

The Over the Counter Exchange of India (OTCEI) established in the early 1990s was probably the first exchange specifically designed for SMEs to list. However, trading volumes didn't grow much and it didn't reap desire result. But this OTCEI experience taught us that trading activity and liquidity is a crucial factor for success of these exchanges. India was adopted the NASDAQ model for its OTCEI market which was technologically advance in the era of pre-liberalization and pre-computerization. Many of the features were very new like screen based trading system, used of computer etc.

OTCEI was ahead of its time but it failed because of following main reason (Sharma, 2014)^{vi}.

- The low volumes and lack of activity affected the stock performance causing the index and shareholders to lose value. Liquidity of stocks was low
- Lack of marketing efforts by the OTC to spread awareness about the uniqueness of the exchange and its scripts
- Technology discouraged speculation, which was necessary for driving volumes and liquidity
- Stringent regulations for listing which



was regulated by Securities contract Act 1956.

- Stand alone SME exchange which not connected well to BSE. (NSE was not in existence at that time)

Indo Next

Indo Next was separate trading platform initiated by Bombay stock exchange and federation of Indian stock exchanges in 2005. IndoNext has been formed to assist SMEs for its capital requirements through regional stock exchanges. The IndoNext is also considered failed because of the following reason (Sharma, 2014)^{vii}

- regional stock exchanges were unable to attract trader attention for lack of advanced technology
- Very Low liquidity on the regional stock exchange and proper coordination among them.
- Insufficient information available about the new SME's
- Excessive regulation from the government.
- Firms listed on the B1 and B2 groups on the BSE exchange were shifted to the new exchange confusing investors about the actual intent of IndoNext
- Credibility of the listed firms.
- Lack of marketing and awareness among investors, SMEs and institutions

BSE-SME & NSE-Emerge

OTCEI and IndoNext did not achieve the desired objective. But these experiences taught us that trading activity and liquidity is one of the main crucial factors to achieve success. So after evaluating past experience the third attempt has been made in the form of BSE-SME and NSE-EMERGE establishment in year 2012 with a few months gap, after SEBI vide ICDR third amendment regulation 2010, inserted a new chapter XB. Under this chapter SEBI has provided the way for new securities by listing SMEs on stock exchanges. It gives new impetus to exchanges for launching SME platform.

The present NSE and BSE SME platform are different from past OTCEI and Indo Next in terms of^{viii}

- liquidity by Market Making concept,
- 100% underwriting of issue,
- simple and low cost listing procedure and
- facility to graduate from SME board to main board.

Other crucial factors which will prove catalyst in the progress of India's SME exchange are new players who emerge recently are VCs, Institutional Investors and high net worth investors.

These new exchanges heading toward the right direction can be understood by its volume of listing as per Table-1. As data showed in Table-1 BSE SME has more listing than NSE EMERGE, the one of the

Table 1: SMEs listed on BSE-SME & NSE EMERGE

No. of Issues	BSE	NSE
SMEs Listed	107	21
Market-share	84%	16%

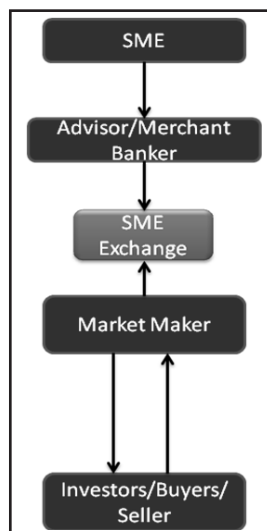
*** As on 1st December 2015**

Table 2: Some important SME Exchanges around the world & number of listed companies

Country	SME Exchange	Establishment Year	Listed SMEs As of 1st Dec 2015
Taiwan	GreTAi	1994	1133
UK	AIM (Alternate Investment Market)	1995	2,382
Japan	MOTHERS (Market of the high-growth and emerging stocks)	1999	217
Hongkong	GEM (Growth Enterprise Market)	1999	436
Canada	TSX Ventures	2001	256
South Africa	JSE ALIX	2003	116
Singapore	Catalist	2008	101
China	Chinext	2009	484
INDIA	NSE-EMERGE/BSE-SME	2012	129

Source: Respective Exchanges website

Figure 1 - Market Structure Conceptual Model





reason is BSE SME aggressive and effective awareness campaign through many seminars and workshop across India^x.

But as compare to some important peer in developed countries and emerging market (Table-2) India's SME exchanges is to cover long journey.

Market Micro Structure

Around the world mainly two types of SME exchanges structure are prevail-First Separate board but under the parenthood of main-board and second type, completely standalone SME exchange^x.

India's BSE-SME and NSE-EMERGE function under BSE and NSE respectively. Most of the SME stock exchanges around the world are part of the main board except few like Taiwan's GreTai securities market is one of the few SME exchanges that is completely stand alone, it is not connected to Taiwan Stock exchange².

In India SMEs can list by IPO or even without issuing IPO through Institutional Trading Platform (ITP) which permit SME to list without issuing IPO as per SEBI guideline .ITP is for startups and medium enterprises who do not listed anywhere so they can list on ITP through Informed investor. India has adopted UK AIM market structure except Nominated advisor (Nomad) conceptⁱⁱⁱ. There are many important players involved in whole structure of SMEs exchange (Fig 1). Market Maker is one of the players

² This is arose for historical reason that may not be relevant to other exchanges. GreTai previously was OTC exchange for SME after the exchange grew, regulatory framework and trading system were developed and become as current standalone SME board.

among them who help in reducing the liquidity problem, Market Maker play a crucial role. Market Maker is member of stock exchanges who are registered under regulator guideline after satisfying eligibility criteria. They are dealer-broker and provide two way quotes for buy and sell. Their earning is spread of bid and ask of script quoted for investor. In India market making is compulsory for all script willing to listed on SME exchanges³. As market maker provide the liquidity as well as easy exit option for investors but various thinkers and academician opposes the idea of Market maker because the quotes given by market maker doesn't reflect true fair value of shares which should be decide by real market force by demand and supply.

Second important element is Merchant banker who helps in listing. Internationally Advisor plays same role as merchant banker⁴. Merchant banker assist SMEs in their listing procedure by arranging right market maker, writer, registrar, transfer agent, advertising agency etc.

The above current market structure will enhance the SME Exchange, by way of

- Because of separate board greater visibility to investor which result in business goodwill and credibility.
- Market Maker provide Liquidity and easy exit to VCs, PE and other investors
- Later stage funding is easy

³ SEBI, vide its Circular No. CIR/MRD/DP/14/2010 dated April 26, 2010 has issued 'Guidelines for Market Makers on Small and Medium Enterprise (SME) Exchange/separate platform of existing Exchange having nationwide terminal

⁴ UK AIM called it NOMAD (Nominated Advisor)

- Foster in employee loyalty and motivation through stock option plane
- As compare to OTCEI and IndoNext it is Transparent and well regulated because of corporate governance and other disclosure clause by SEBI.

Suggestions

Small investor ought to give opportunity to participate in SME market those who want to take risk, at present the minimum investment lot is 100,000 Rs which should be further reduce so that can help in improving liquidity and retailer can also be benefit from the SME's growth.

Awareness about SME's exchanges seems low among market participant. So exchanges and government jointly frames strategy to promote SME's exchange by creating understanding and interest thorough public awareness campaign.

All disclosure and compliance should be allowed through online mode which helps in reducing compliance cost as well as intermediaries cost.

Merchant Banker fees some time discourage the SME's for listing so reasonable upper cap should be defined for Merchant Banker by regulators.

Tax incentive should be announce to SME's investors which further fetch the attention of investors.

Conclusion

From the above it can be concluded that often it takes a few years before nascent markets stabilize and start attracting substantial investments and issuers. As per the number of listing exchanges has launched well but just two year has been done at this point it would be too early to say whether the attempt has been achieved the success.

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Social Entrepreneurship: Sustainability and Effectiveness, Necessary for Survival

Abstract

Wherever there is human activity, there is creation of waste. Wherever there is waste it needs to be disposed. It is this method of handling, storing, collecting, and disposing off this waste is what makes it a risk or safe for our environment. Almost one to two thirds of the solid waste generated is not even collected (World Resources Institute et al 1996). Yet again, if collected it is mostly mixed with human and animal excrete and dumped indiscriminately. Even if they do become part of the organized landfills, they are badly managed leading to rodent, flies menace which result in epidemics.

Solid waste management (SWM) is a multidimensional challenge faced more so by the urban authorities, by all the developing nations. Wastes, collected from all households, were segregated and weighed and it was found that household solid waste (HSW) comprised of nine categories of waste with vegetable/food waste (62%) being the largest component. 66% of this waste was bio degradable or compostable in nature. Municipal authorities are usually the responsible agencies for solid waste collection and disposal, but the magnitude of the problem is well beyond the ability of any municipal government to tackle. Hence if the residents themselves took proactive

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action it would change the complete landscape of waste management.

This study shows that household solid waste can be converted from a burden to a resource through segregation at the source. So if people (solid waste creators) themselves were aware of their role in this direction and a mechanism to assist them in this pursuit was developed a positive result was definite on the cards. It is a narrative of a social entrepreneurship venture which aims at reducing domestic garbage at the first instance. It suggests making composting a regular feature of an urban Indian's life. This could be done by developing a range of home composting solutions to ensure that one can conveniently and hygienically compost at home or larger units, and thereby reduce the garbage. It also helps in overcoming the conditioned mind sets to believe that if managed well, garbage can be hygienic and extremely useful too.

This research paper should benefit both the development academicians (teachers and students) and entrepreneurs in the making, NGOs,



and policy makers also. It helps in understanding

- Functioning of social entrepreneurship venture
- Marrying of ideas, both traditional and technological innovation in the changing landscape for entrepreneurs

Key Words

Social Entrepreneurship, Waste Management, Champions, Ecopreneur, Daily Dump

India's population has yet not become double the hands to work but remains that number of mouths to feed (and argue), and at the same time be waste creators. The demographic dividend benefit is yet to be seen. All that we see right now is the stifling and collapsing earth under both the natural and consumerist burden of our huge population. Solid wastes are all the wastes arising from human and animal activities and that are discarded as useless and unwanted. These wastes create garbage.

This creation of garbage needs solutions. Just the sheer logistics of collecting and carting this amount means that we need to deploy so many more trucks everyday and add to the traffic congestion of our cities and then dump it in a toxic landfill that will be part of the growing city soon (Habitat, 2010). While the city budgets for waste are huge, there is still a lot of leak in the funds due to corruption also. Thus, waste just does

not get picked up at all, or gets picked up late and is not recycled.

It is a colossal task that the government cannot be effective at without the voluntary involvement of the society also. Individual efforts need to be channelized into a movement. The role of social entrepreneurs is evident at this juncture.

Social Entrepreneurship has been defined by Alan Fowler (2000) as "the creation of viable socio-economic structures, relations, institutions, organizations and practices that yield and sustain social benefits". Bill Drayton states that social entrepreneurs are practical visionaries, those who possess vision, innovation, determination and long term commitment to a social change. The Social Enterprise Alliance (2009) stated that in the present scenario, social entrepreneurship is evident globally. Not only has it become a global phenomenon but covers many areas of the industry ranging from retail, manufacturing, service, to research and consulting or even, finance, technology or community development. Yet, while entrepreneurship itself is in its adolescence, social entrepreneurship research is in its nascent stage

Having ascertained that the world is in a dire need for a global sustainable society, there are a large number of green or ecopreneurs who are gearing to take charge to achieve this. Global Sustainability is merging of many ideas and is not an island area anymore. In their research paper "Sustainability: A Paradigmatic Shift in Entrepreneurship Education", Amatucci et al say that social entrepreneurship originates from the non-profit sector (Dees, 1998; Mort,

Weerawardena, and Carnegie, 2003).

Primarily social entrepreneurship literature focuses on two themes: analysis and the focal point of the activity which could be individual, organizational or inter-organizational. At the individual front it is the founder (Mair & Marti, 2006), who often appears as a "change maker" and takes centre stage (Van Slyke & Newman, 2006). But, it is at the inter-organizational level that the definitions deal with the processes of value creation. This includes identifying of opportunity, adopting a mission to create social value, and getting involved perpetual innovation, adaptation, and learning (Anderson & Dees, 2006; Dees, 1998; Roberts & Woods, 2005). Mair and Marti (2006) reiterate that social entrepreneurship includes efforts to tackle social problems and also synergize transformation and impact certain issues, irrespective of the fact that it is a for profit or non-profit organization.

Austin, Stevenson, and Weiskillern (2006) apply the people, context, deal, opportunity (PCDO) framework developed in Sahlman (1996) to social entrepreneurship to evaluate the similarities and differences with the commercial entrepreneurship framework.

Previously, we had organizations that made some green effort by changing certain processes but we can now often see a change through formation of a completely new green businesses or start-ups. However, the assumption those sustainable or green businesses are compatible with business yet merging with the long term vision of the future sustainable society albeit

radically different.

The Context

Earlier, large houses could handle their own green waste in their own pits but now everything was dumped in any neighbouring area that was found vacant. Government tried to take an initiative by launching Swachh Bangalore Campaign by collecting segregated garbage. But soon people lost interest and faith when they saw that segregated waste got mixed up again. Thus, it was best to get people motivated to reduce their own waste constructively. Not for any extrinsic award but for themselves. It should be a very simple act and not very cumbersome or time taking.

Daily Dump started as an experiment to make sense of the mess, both metaphorically and literally. Daily Dump was an answer of a small team to the "developed country" idea that seemed to be ignoring the basics. Most people have a negative view with a lens "What do they don't have" (negative). While they needed to be proactive and inquire "What do they have?"

The Methodology

We adopted a single embedded case study to examine how a social change can be brought about. The data for the case drew from both primary and secondary sources. Primary data included interactions with the ecopreneur, the users and on site observations. The secondary data was gathered from their website and the media information.

This project initially evolved without a



formal project report. It was a culmination of the ideas that had come up during brain storming sessions between the design students and the design academia. Knowledge was shared. Ideas from Systems' Theory, sustainable development, design methods, sacred geometries, craft development, Indira Darshinis (stand up Indian Fast food places), the open source movement, micro enterprise, facilitative processes and design all influenced the project. Daily Dump was an endeavour where constant learning was taking place. Earlier ventures and mistakes led to introspection that resulted in improvements on the design and its scope.

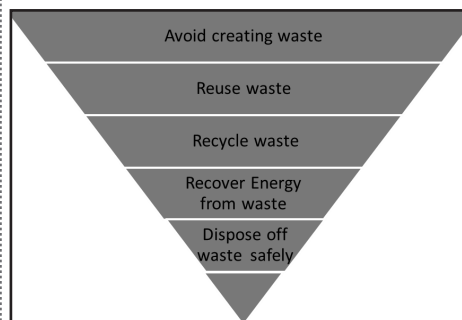
A preliminary research was conducted by Daily Dump themselves to describe the scope and constraints of the effort created. Uniqueness and innovativeness of Daily Dump methods used and their integration with the development process.

- Three focus groups (of 6 people each) were used to elicit perceptions of Bangalorean homemakers on waste, segregation, and idea of composting.
- 150 residents provided qualitative data through questionnaire based interviews to understand the diverse needs, concerns and attitudes.
- Studied three Co operative projects and one large Government run project for waste management and composting.
- Got several insights on the composting process,

- Created and tested prototypes with different materials, sizes and configurations in both controlled environment and tested in homes with feedback from the actual users.

There was a constant juggle between what the scientists said could be done and what the market defined as the best process for composting and also the home maker's needs. To find the solution it was essential to understand the complete waste management paradigm.

Sustainable Waste Management Paradigm



From the traditional waste hierarchy it was essential to convert the thoughts and ideas of all primary waste creators who would contribute by changing to a more sustainable waste management paradigm.

"The future belongs to those who believe in the beauty of their dreams."

Eleanor Roosevelt

All ideas are only effective when they get converted into an action plan. The

action plan should culminate to sustainability. It has been found that Decentralised systems in this ecosystem are more likely to be effective and sustainable. The home waste was what Daily Dump targeted. Their composters started by keeping about 3.5 tonnes of organic waste out of landfill every day. This also meant that the dry waste was already segregated, recyclable and also organic fertilizer is produced. They needed many more decentralised systems in place to help tackle the waste issues. Thus, Daily Dump was the brand created for home composting solution for urban Indian homes. The project focus was "Manage your waste". It would only be possible if all stakeholders were involved in the action plan's execution.

Stakeholder Engagement: The choice of finding an effective, efficient and sustainable solid waste solution, it is essential to identify the stakeholder by applying the affect criterion. Positive other issues also emerged and gained from the synergy (Canioto, Vaccari, Visvathan, & Zurbrugg, 2014). (Heidrich, Harvey, & Tollin, 2009). Social awareness about waste was created and shared at various platforms from schools, to housewives, to construction companies. This tacit knowledge once created would not only go a long way with waste creators but also the future stakeholders. The tacit knowledge of waste creation led to self and communicable awareness that would help in reduction of waste at the waste creator's end. Only this would act the stepping stone for actual effective implementation of the new acquired knowledge too.

The Waste Creators and Managers

The project was always tentative. The attraction was a change in behaviour, a focus to make things more accessible, doable and non-threatening. The purpose was to create a will to do rather than complain about what was not happening. Every contributor to home waste (complete family) was targeted. Home leaders, house help, all family members were focussed on.

Synergistic Utilization of the Stakeholders: The Solution Providers

While the traditional potter's skills were being lost; potter's families did not want to follow family skills with pride. As the pots were no longer being used to cook, store or use in daily lives there was not a large modern market for their services. Besides earning respect while working with and providing solutions with Daily Dump's design team, this venture could provide the potter's a product to earn a steady income yet also solve an almost unsolvable urban problem.

While prototyping it was found that terracotta was porous and controlled the excessive water discharged during decomposition. Terracotta was both a symbol of an enduring Indian icon and aesthetically a treat to the eye. Constant innovation both in size and material was being experimented.

The Waste Collectors and their Tacit Knowledge Utilisation

Kabaddiwalaas (waste collectors previously perceived as deprived, uneducated, lacking purpose, reliability



and professionalism) were the repositories of knowledge. They knew as to what could be recycled and what could be not. They were an epitome of lean management organization and with just in time (JIT) inventory. They knew how to leverage this vast knowledge pool, although it did not command respect and money. This was shared and this led to segregation of waste mindfully.

Community: Leverage Celebrity Influencers

The researcher was immediately reminded of what Kasturi, the brain behind Daily Dump had said in 2010 in an interview to accentors BlogSpot that if Amitabh Bacchan or Rajnikanth endorsed composting it would be more popularized. It took four years to make her wish come true by Amir Khan in the third episode of the second season of Satyamev Jayate. Meanwhile, She has been continuously able to address just that, in also making all the people, individually, as much responsible as the government.

Catch them Young

Multiple ways of increasing awareness even among the young stakeholders was initiated. Fun books, miniature though actually usable products were also promoted. They became highly popular and resulted in a do it yourself (DIY) constructive activity for many. Track your trash trails were also organised to increase the awareness about the gravity of the situation for both the young and the old.

Civil Society, Local Community, Academia and Media

NGOs are considered public opinion representatives or mobilizers and thus they are recognized as key stakeholders'. Considering that waste management has universal importance and applicability across all regions the role of NGOs, CSO's and media cannot be ignored. Media was undoubtedly a very heterogenic group and could be a source of information for people, amplify their opinions, and mobilize actions. Garden societies, NGO's and media were all roped in. The Schwab Foundation for Social Entrepreneurship in partnership with Jubilant Bhartia Foundation presented the India Social Entrepreneur of the Year award to Daily Dump's Poonam Bir Kasturi. The foundation is a sister organisation of the World Economic Forum (WEF).

Academia and Researchers

Despite multiple initiatives by the organisation one can see great research possibility and joint efforts at understanding the financial viability marketing strategies and sustainable management practices besides and design, which is the core strength of Daily Dump.

Public Private Partnerships

With government making a mandatory stipulation in all housing societies to have their own waste management systems in place would lead to more than half the battle won. (Rayner, 2012) However they need to put regulators towards the need

for sustainable environment by builders who are finally the main contributors of home garbage.

The new and innovative 'Aaghas' are the answer by Daily Dump. One such step in the PPP could be Daily Dump which started as a retail outlet, which is based out of their office and research centre at the upmarket Indira Nagar, Bangalore. They also sold their products through tie-ups with other stores and with agents. Their products were also available in multiple cities and states across India.

Marketing

Since there were very little funds initially, there was no big marketing mix or plan designed for this purpose. The toughest part was to get the first 100 customers. The result appeared to be very slow and took a lot of lungpower. However what they worked on was what a holistic marketing concept was. Constant hand holding of customers was required and was provided by the team. All queries answered patiently and newer intervention tried and implemented. Audit, demonstrations, service plans were included to make the whole exercise sustainable and also viable for the new.

Undoubtedly Daily Dump was to become a brand, a service, a set of products and a way of life that people would begin to subscribe to. It was crowd sourcing and achievable with the spread by word of mouth. It sought to bring larger waste issues closer to ordinary people. How to segregate plastics, toxics etc? What to do about them? It was about manufacturing and selling composting products and

services.

Daily Dump got initiated by Kasturi with a lean core team, two in support team, potter families and their families. Most employees were old customers. Daily Dump was a not for greed company and worked in the area of urban waste and related fields. What they needed was enough to survive and pay for their research. Everyone worked on a day to day jobs as well as research. It followed a very flat structure. Kasturi was a self-starter; self-funded, and did not draw a salary herself till 2010. According to Poonam Bir Kasturi, there is no chance of being developed if we continue to perceive ourselves and the worker class as underdeveloped. A migrant labour is more aware of a weed from a plant, a herb from a toxic seed and also pour concrete to our bridges. They have a lot of tacit knowledge, gathered over years. We have robbed them of our dignity of knowledge and make them feel poor. We need that knowledge, which could be synergistic but we tend to develop systems to use their labour not their knowledge.

Kasturi believed in the distinguished system theorist Russ Ackoff's description of a common trap that guided all the work our world tends to do as "doing the wrong things righter". The righter we do the wrong things, the more wrong we become. When we make a mistake doing a right thing and correct it, we become righter. Therefore it is better to do a right thing wrong than the wrong things right. This way we learn and actually get righter. Most of our current problems are as he says the result of policy makers and managers (designers) busting a gut to do the right things right." Einstein supports by saying "you



can't solve the problems created by current pattern of thought using current pattern of thought."

According to Ackoff to bring a change we need to adapt the three steps of process analysis.

- Take it apart
- Try to understand what the parts do
- Assemble the understanding of the parts into the understanding of the whole.

The inspired Daily Dump may not be able to change the world but it can make a difference. Needless to say, that the process is still not complete however it is heartening to see more and more people joining the effort to make the world, a little better place to live in.

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