Enhancing Competitiveness of the Bottom of the Pyramid – The Role of Small and Medium Enterprises and Rural Artisan Clusters In India.

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Abstract

This paper tries to answer the question " Is there a way out for the Indian Small and Medium Enterprises (SMEs), Rural Artisans and poor of India, in the wake of increased competition from foreign Multinationals and liberal trade policies?" This study also tries to depict the plight of rural India and in the process, identifies the opportunities that are thrown open by the present challenges. It also brings to table, some of the important lessons from the UNIDO experience (from which it heavily draws its references) on Industrial clusters and networks. It draws from the cluster theory as well as the experiences of UNIDO to stress the importance of clusters and hence the competitiveness of SMEs and SME clusters. The need of the hour is to create competing rivalries among the cluster partners (competition in terms of innovation and other differentiators and not through the conventional, unhealthy under- bidding) through the collaboration and cooperation among the firms in the cluster. It also mentions some of the UNIDO's international experiences on cluster development and the possible lessons from them. Even though the literature of this kind is widely available elsewhere, this study tries to bring them together.

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"India is living in its villages" – was a famous quote by Mahatma Gandhi. Rural India is where; about 72% of the total population is living. Of the India's 2002-03 GDP of around $520 billion (at 1995 prices and exchange rates), rural India would have accounted for $193 billion worth of Income, which is translating, to about 37%. Clearly, the development of the country obviously depends on the development of rural India.

The Plight of Rural India – An eye opener:

A bit of statistics from 2001 census' data would reveal that the total population of India as at 0:00 hours on 1st March 2001 stood at 1,027,015,247 persons. With this, India became only the second country in the world after China to cross the one billion mark. The population of the country rose by 21.34 percent, during 1991 - 2001. The sex ratio (i.e., number of females per thousand males) of population was 933, rising from 927 as at the 1991 Census. Total literacy rate was returned as 65.38% of which Males literacy rate is 75.85 % and Females 54.16 %. In India, the total workers (main and marginal put together) were 39.26% and non-workers were whooping 60.74%. In rural India, of 740,255,371 persons, the total workers were 41.97% and non-workers 58.03% (rural India is working hard to feed the rest of the country). Of the male population of 51.39% of rural India, the total workers were 52.36% and of the female population of 48.61% of Rural India, the total workers were 30.98%. More and more of women entrepreneurs and women Self Help Groups are working hard at this, to further increase this number in future. The basic amenities in rural India were very poor.

Also, the 2001 census enumerates that of the total houses in India, 71% were in rural areas, of which, only 24% had brick, stone or concrete roofs and 70% had only mud floors. Of the households, in 2001, of 192 million households, 72% lived in rural India. 46% of the rural households had no access to electricity. Only 59% of rural households had separate kitchens within their houses. For 90% of rural households, the primary cooking fuel was firewood, cow-dung cake and dried fodder. Only 24% of rural

households got their water supply from taps. On the contrary 43% got water from hand pumps and 22% from wells. Per capita availability of utilizable water resources has plummeted to 1250 cu m, 20% of the volume in 1947, and is projected to halve again by 2025. By that year, according to projections, one-third of India's population will be living in conditions of absolute water scarcity. 72 million households, about 52% of rural families did not have a toilet within the four walls of their homes and almost 108 million of 138 million, i.e. 78% rural households did not have toilets.

Above all, poverty continues to be the most pressing problem. One in every four people alive today live in absolute poverty. Within this group of absolute poor, some 800 million go hungry on a regular basis (UNDP 1998). These bare data underline the fact that, although very considerable progress has been made in recent decades, the challenge of eradicating poverty remains enormous. ……. The 1992 IFAD study sets out what it terms 'functionally vulnerable groups', defined as those groups, which are 'economically insecure and thus particularly sensitive to the slightest change in external factors'. Such vulnerable groups may or may not be included in the core of the rural population that is below the poverty line but the report argues, 'functionally vulnerable populations subsist on the borderline and can easily fall below it, temporarily or persistently, as a result of any deterioration in their conditions'. Thus, for India the data indicate that functionally vulnerable smallholder farmers amounted to 280m people in 1988, the landless accounting for a further 180m making a total functionally vulnerable rural population, with other groups, of some 470m. However, India's total rural poor is identified as 250m, indicating that the 'functionally vulnerable' includes some 220m people who fall above India's poverty line.

Out of 1 billion plus people, 423m live in absolute poverty. 95 out of every 1000 children born die before the age of 5. More than a third of 200m school age children don't attend school and about 40% of India's villages have no access to markets and even social services.

In the hierarchy of road system in India, rural roads include other district roads (ODR) and Village roads (VR). There are about six lakh villages spread over 3.28 million square kilometers area. There were road development programmes like Minimum Needs Programme (MNP) and Basic Minimum Services programme (BMS) which envisaged provisions of connectivity to all villages and habitations. According to the recent study by Planning Commission only three-fifths of the nearly 6lakh villages are known to be connected by all weather roads. In 2000, a Centrally Sponsored Scheme called the Pradhan Mantri Gram Sadak Yojana was announced with the objective of connecting every village that has population more than 500 persons by the year 2007.

Ways to attack these problems…

Terrible figures, aren't they? But, instead of bemoaning our lack of progress, lets think these as opportunities. Rural India is not as poor as these figures tend to suggest. The above numbers are not to portray the bad shape of our rural India but are more an eye-opener for us to work towards bringing happiness to these faces. There are lot of happenings from all the stakeholders like Government of India through its various policies, State Government agencies, Micro Finance Institutions, Unilateral agencies, Development Organizations, NGOs and particularly Small and Medium Enterprises (SMEs) and the Rural Artisan Clusters. These stakeholders are trying to build a new world by eradicating poverty, which includes in itself all the factors that I have listed above.

One way to tackle poverty is focusing on Agriculture and the provision of basic infrastructure such as roads, clean drinking water, education, electricity and telecommunication.

A study by Fan., etal provides important pointers to how the government's rural infrastructure funds could be managed, given that the principal aim is the eradication of poverty (taking as a crude approximation).

Rural public investments that decrease poverty the most (in descending order)

Infrastructure Sector	**Number of poor lifted out of poverty per Rs.1 million**
Roads	124
Agricultural R & D	85
Education	41
Rural development	26
Soil and water conservation	23
Health	18
Irrigation	10

The above data suggest that the government has to primarily invest in roads, agricultural R& D and education. The above results can also be used to establish priorities in the allocation of investment among villages.

India has become a happening place now with more and more companies started shifting their base to India (like GE and others) and a large number of Fortune 500 companies have shifted their R&D centers to India primarily because of our large population, cheap labor, educated masses and unadventurous culture. Goldman Sachs's (GS) Global Economics paper by Dominic Wilson and Roopa Purushothaman brought into focus the likely economic power shift from G6 to the emerging large economies of Brazil, Russia, India and China (BRIC) during the next 50 years. The GS paper found and conclusively shown that India has the potential to raise its income per capita by 35 times and GDP by 60 times at the current levels (www.gs.com). In this process India will become the third largest economy and the fastest growing economy in the world.

The way out…

"All work is by nature composed of good and evil. We cannot do any work which will not do some good somewhere: there cannot be any work which will not do some harm somewhere". India has been liberalizing trade since 1991. India has opened its gates to foreign companies to set-up their establishments in India and come 2005, Indian companies will have to face the competition in almost all sectors of the economy. From

the economic survey, it is found that the progressive removal of Quantitative Restrictions of restricted items has come down from 2984 in 1997 to 497 in 2002, free items has risen from 6161 in 1997 to 9611 in 2002 and the number of items under SIL (Special Import License) has been brought down from 765 in 1997 to 0 in 2002. As this continues, India will be an open economy where according to Charles Darwin's theory of evolution, "Only the fittest can survive".

This work of India (by LPG (Liberalisation, Privatisation and Globalisation)) brings with it both good and harm. Good for the educated, urban workers and non-workers as they will have greater opportunities; and also to the big Indian companies, which can take-over the invasion of foreign multinationals and also to invade other world markets, and bad for the rural, uneducated masses; and also to the smaller Indian companies, which has to compete with global giants for their survival.

The only way out could be, to strengthen the existing rural systems and make them self-sufficient. This could happen only by helping Small and Medium Enterprises and the rural artisans (people with innate skills and talents) in becoming effective and competitive enough to face the future. A number of issues and business practices of global players and markets can be observed, learnt and adapted for ensuring competitiveness of Indian SMEs.

Let me give an anecdote, which we use to hear in school days and what domestic and global competition is all about. It is about two friends who while walking through a dense forest suddenly hear the roar of a bear. One of them immediately changes his shoes that he is wearing in, to the one, he uses for running. His friend asked him: "If you change your shoes, do you think you can out beat the bear?" The other one replied: " The idea is not to beat the bear but you." This is what the business today is all about. Unless the Indian SMEs are able to compete with its nearest competitor, be it an Indian Company or foreign MNC, it's going to perish.

Towards this, Michael Porter's classical works on Competitiveness and Cluster developments will go a long way if Indian SMEs try to collaborate, co-operate and compete with each other and the global players.

SMEs – Small is Beautiful

The Importance of Small and Medium Enterprises (SMEs a.k.a SSIs) in any economy cannot be overlooked as they form a major chunk in the economic activity of nations. They play a key role in industrialization of a developing country like India. They have unique advantages due to their size; they have comparatively high labor-capital ratio; they need a shorter gestation period; they focus on relatively smaller markets; they need lower investments; they ensure a more equitable distribution of national income; they facilitate an effective mobilization of resources of capital and skills which might otherwise remain unutilized; and they stimulate the growth of industrial entrepreneurship. According to a UNIDO report, Support for SMEs is generally based on three assumptions. First is that, it sustains a broad and diversified private sector and creates employment and thus benefits the country as a whole; second, a strong SME sector will not emerge without support from the state, but they suffer disadvantages in the markets because of their size; third, the programs aimed at smallest enterprises, have been justified more in terms of their welfare impact than their economic efficiency.

In India, Small Scale Industries (SSI) sector accounts for around 95% of the industrial units, 40% of the value added in the manufacturing sector output, 34% of exports and provides direct employment to 20 million persons in around 3.6 million registered SSI units. The SSI sector in India contributes to about 7% of India's GDP during 2002-03. Now, the question is, Can it overtake the invasion of foreign companies through their innovative, quality, cheap and readily available products?

Competitiveness of SMEs:

In developing countries like India, making the SMEs more competitive is particularly pressing as trade liberalization and deregulation increase the competitive pressures and reduce the direct subsidies and protection that Governments offer to SMEs. If our SMEs are to be competitive enough to withstand and fight back the foreign MNC products, they have to be nurtured. According to Porter, "the only meaningful concept of competitiveness at the national level is **Productivity**, which is the value of output produced by a unit of labor or capital. Productivity in turn depends on both the quality and features of products (which determines the prices that they can command) and the efficiency with which they can be produced. Productivity is the prime determinant of a nation's long-run standard of living; it is the root cause of national per capita income". Further, " to find answers, we must focus not on the economy as a whole but on specific industries and industry segments. We must understand how and why commercially viable skills and technology are created, which can only be fully understood at the level of particular industry".

International trade and foreign investment can both improve a nation's productivity as well as threaten it. They expose the nation's industries to the test of international standards of productivity. An industry will lose out if its productivity is not sufficiently higher than its rivals to offset any advantage in the local wage rates. As wage rates in India are sufficiently less to attract multi-nationals, the only way is to increase the productivity of local small industries. This means, the increase in the productivity of **labor** i.e. human resources, the productivity of **capital** and that of the **process**, which in turn relates to the use of **technology** that yields quality and innovative products.

The 9-factor model of competitiveness (Cho, 1994) lists the following factors responsible for the national competitiveness. They are 4 human factors, 4 non-human factors namely Workers, Politicians & Bureaucrats, Entrepreneurs, Professionals, Resources, Demand, Related Industries, Business Environment and the ninth being Chance Event. The same should be true for SMEs also.

According to Ex-Commerce and Industry Minister and President of the National Productivity Council, Mr. Arun Jaitley at the 47th meeting of NPC, "It has become so competitive these days that bulk of the labor, for reasons of higher productivity, has now shifted to female labor. If we look at other Asian economies, Bangladesh or Srilanka, Cambodia or Myanmar, we find that in manufacturing, it is female labor, which is being encouraged because they have been found more disciplined and hence with higher Productivity".

Problems characterizing the SMEs:

The first OECD ministerial conference on SMEs and Globalisation which was held in Bologna in December 2000, identified and discussed some of the critical issues regarding SMEs, Such as: Innovation's vital role on SME competitiveness, SME's key roles in national innovation systems, the importance of improving access to information and financing that facilitates the SME's innovation process, and the relevance of clusters and networking to stimulate innovative and competitive SMEs.

Some of the problems/ challenges the SMEs facing are:

- Unable to capture market opportunities, which require large production facilities and thus could not achieve economies of scale, homogenous standards and regular supply.
- Experiencing difficulties in purchase of inputs such as raw materials, machinery and equipments, finance, consulting services, new technology, highly skilled labor etc.
- Small size hinders the internalization of functions such as market research, market intelligence, supply chain, technology innovation, training, and division of labor that impedes productivity.

- Emphasis to preserve narrow profit margins makes the SMEs myopic about the innovative improvements to their product and processes and to capture new markets.
- Unable to Compete with big players in terms of product quality, range of products, marketing abilities and cost.
- Absence of a wide range of Financing and other services that are available to raise money and sustain the business.
- Absence of Infrastructure, quality labor, Business acumen and limited options / opportunities to widen the business.
- Poor IT and Knowledge infrastructure.

To overcome all these difficulties, Indian SMEs and rural artisans deserves all the policy support the Government can offer. What they need is, not protection but institutional support to fund modernization and technology up gradation, infrastructure support and adequate working capital finance. Also they have to have professional inputs and knowledge about various happenings in their own industries in and around the country. This brings in the concept of SME networks and clusters that stimulate innovative and competitive SMEs. These concepts (are not something new, but can be traced back to Alfred Marshall's analysis of industrial districts in Britain in 1890s) essentially bring together various stakeholders like technology providers, labor force, financing arms, consultants, marketing arms, and others, for a common good that will help in enhancing the strength of SMEs.

Industry clusters are group of competing, collaborating and interdependent businesses working in a common industry and concentrated in a geographic region. Clusters improve competitiveness, which results in improved productivity by improved access to specialized suppliers, skills and information; Innovation is given more importance as the need for improvement in processes of production is highlighted and once established, clusters will grow as new firms and new suppliers will enter the system which will have the cascading effect towards a strong and competitive Cluster.

From Competition to Co-opetition:

There are always some important things that we could learn from the stories we read and heard in our childhood and the ones we keep telling to our children. Referring to the story of "The Lion And The Three Bulls" of Aesop's Fables and "The Bundle of Sticks". If we know them by heart, what prevents us to practice and implement them in our lives and organizations?

As far as SME clusters are concerned, every SME knows that the other SME in the same cluster is also vying for the same customer, also going to use the same support structures and also suffers the same shortcomings. Will it not make sense to collaborate and co-operate with each other to overcome these shortcomings and transforming disadvantages into advantages but at the same time to compete each other innovatively to achieve higher levels of productivity? In fact active domestic rivals will create pressure to innovate faster and achieve more sophisticated competitive advantage than their rivals, both domestic and foreign. Nowhere is the role of fierce rivalry more apparent than in Japan, where there were 112 companies competing in machine tools, 34 in semiconductors, 25 in audio equipment and 15 in cameras (these numbers pertains to the year 1990) – in fact, there are usually double figures in the industries in which Japan boasts global dominance. Domestic rivalry also promotes the formation of elated and supporting industries. SMEs should learn to go beyond competition by looking at the opportunities it throws open and try to co-operate with each other.

There are always some comparative advantages for the SMEs in the cluster, as the cluster participants can either be allied industries or supportive industries or suppliers or any other stakeholder or even rivals. Extending the theory of comparative advantage of David Ricardo to SME clusters, even though all SMEs inside the cluster are having the common facilities and problems, each unit is unique with its own characteristic factors that determine its productivity. This could be in terms of organizational culture, leadership, quality of work life, labor quality, internal environment and processes,

adaptation to change and new technology among others. This model was argued as incomplete as it had two major problems. First, the simple Ricardian model predicts an extreme degree of specialization, but in practice, countries produce not only one but many products including import-competing products. In case of SME clusters, this model fully holds good, as the cluster is known only by its high degree of specialization. Second, the theory explains trade based on differences in productivity levels between countries, but it does not explain why these differences exist. Considering different unique factors pertaining to each SME unit can solve this problem, which was explained by Factor Endowment theory of Heckscher-Ohlin (HO model).

Between the rivals, they can still collaborate on some areas like common Plant and Machinery, common environmental systems, common labor pool, common suppliers etc. This needs a broad, out-of-the-box thinking and complete understanding about the various factors involved in such co-operation. It sounds simple but there are very crucial obstacles in achieving this like the typical prisoner's dilemma. This is like walking on the tight rope; we need to balance all the forces acting on us.

International cluster experiences (from the UNIDO study):

The apparent success of SMEs in North-eastern and central Italy and in other regions of Europe, point to the possibility that small can indeed be beautiful. The work of Piore and Sable (1984); Pyke, Becattini and Sengenberger (1990); Pyke and Sengenberger (1992) have presented the Italian experience as a particular model of industrial development in which the emergence of linkages and cooperation between SMEs provides economies of scale and scope. Far from being handicapped by size, clusters of SMEs (it is argued) have advantages of flexibility and responsiveness. They can be more competitive than large firms.

The UNIDO study further argued that policy intervention for SMEs can be particularly effective when it is based on the "Triple C" which stands for Customer-oriented (forces the firms to tackle their key problems of competitiveness), Collective

(as this decreases the transaction costs and helps generate relationships for mutual learning) and Cumulative (as this increases the capacity to upgrade and become less dependent on support from outside).

From the international debate (Rabellotti 1995, Becattini 1989,90 and other collection of articles in Goodman and Barnford 1989; Zeitlin 1989; Pyke, Becattini and Sengenberger 1990; Pyke and Sengenberger 1992; Garofoli 1992), the following have emerged as the main attributes of the Italian Industrial districts: geographical proximity, sectoral specialization, predominance of small and medium sized firms, close inter-firm collaboration, inter-firm competition based on innovation, a socio-cultural identity which facilitated trust, active self-help organizations and supportive regional and municipal government.

The role of policy in Italy and other European districts has been given particular Emphasis. Brusco 1990,92; Best 1990; Murray 1991; and Pyke 1992 stress the importance of the local state in institution building, the promotion of consortia of firms and in particular, the development of collective service centres.

The experience of Danish Network programme (probably the most significant initiative of SME cooperation fostered by government and demonstrating the feasibility of the collective approach) which is of relevance to developing countries are: the cooperation between SMEs can be promoted successfully through skilled external assistance and the leverage of public resources can be increased by working with groups of enterprises. The know-how of promoting networks has been exported to a number of other advanced countries, particularly regions in Spain, Portugal, France, UK, Norway, USA, Canada, Australia and New Zealand.

The experiences of Denmark and Chile with fostering networks show that specialization and cooperation between SMEs can be promoted through public institutions.

Experiences from Indonesia and Brazil suggest that dynamic clusters and networks tend to be buyer driven and that public support for upgrading of SMEs has more impact in buyer driven than in supplier driven chains. Helping SMEs to become more customer oriented is a key element of effective assistance.

These experiences suggest that working with groups of enterprises can increase the leverage of public resources. The collective approach has lower transaction costs and facilitated mutual learning and it can be used for both forming new networks and for upgrading the existing clusters.

The Indian Experience:

It is estimated that 400 modern SMEs and 2000 rural and artisan based clusters exist (some of them exists for decades while others, even centuries) in India that contribute 60% of the manufactured exports from India. Some Indian SME clusters account for 90% of India's total production output in selected products. The examples could be the Knit ware cluster of Ludhiana, Almost the entire Gems and Jewellery exports are from the clusters are Surat and Mumbai, Leather and leather products from Chennai, Agra and Kolkata, Cotton Hosiery from Tirupur, Shoes from Agra, Blankets from Panipat and Bangalore in software sector to name a few.

All these programs originated in December 1995, the Government of India constituted a high profile expert group (the Abid Hussain 'Expert Committee on Small Enterprises') that, in its final report issued in January 1997, explicitly endorsed cluster support initiatives as also recommended by UNIDO. The report stated: "Focus on clusters is the centre-piece of the new approach in an increasing public-private partnership in setting up support systems for small scale enterprises… The expert group therefore recommends that state governments identify the existing SSI clusters and then promote new types of organizations which are joint ventures between the state governments or local authorities and business associations in these clusters". Further, UNIDO was requested by the Ministry of Industry to conduct a mapping of SSI clusters, promote pilot

projects in selected clusters and assist the Ministry to formulate a national cluster development program.

Some of the main obstacles identified, which hamper the cluster development were: the lack of a cultural attitude towards cooperation both at the firm and at the Institutional level; the significance of the transaction costs that need to be borne to identify suitable network partners and to forge relationships; the absence of incentives (i.e. financial, fiscal, etc.) to the implementation of common projects. The imperfect market functioning for the provision of crucial inputs for networking development such as information and innovation; and the high risk of 'free riding' that is especially faced in contexts where the legal framework to back up joint endeavors is relatively underdeveloped (Ceglie, Dini, Clara, UNIDO 1999).

Evidence suggests that the intervention of an "External Agent" such as National / Regional development agencies, NGOS, SME support institutions, international organizations etc. that acts as catalyst that facilitates the emergence of networks and clusters can greatly reduce the significance the above factors (Nadvi, 1995).

In spite of all challenges mentioned above for the development of sustainable, effective and competitive SME clusters, there are enough positive signals, which indicates that the cluster approach could become an effective new way for promoting SME development in India.

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