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# Sustainable Innovation through Clusters in Micro and Small Enterprises (MSES) in the Ethiopian Context

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**ABSTRACT:**
Micro and Small Enterprises **(MSEs)** are described as the National home of entrepreneurships. The studies all over the World approve that MSEs have been recognized as the major drivers of both employment and economic growth contributing to more than 50% to GDP and 60% to employment in developed economies (Beck and Demirguc-Kunt 2006). But the similar study by ILO on the developing countries show that MSEs contribute less than 30% of employment and 17% of GDP in developing countries. Present study focused on meaning of Innovation and how important is innovation and how innovations are being encouraged by clusters in stimulating growth of SMEs. This concept is explained through a case example of Tiruppur Knitwear Cluster**:** Tirupur popularly known as "Banian City"

**Key words:**
Innovation: clusters: MSEs: Sustainable growth

## 1. INTRODUCTION:

Micro and Small Enterprises **(MSEs)** are described as the National home of entrepreneurships. No doubt, they provide the ideal environment enabling entrepreneurs to exercise their talents to the full and to attain their goals. The studies all over the World approve that MSEs have been recognized as the major drivers of both employment and economic growth contributing to more than 50% to GDP and 60% to employment in developed economies (Beck and Demirguc-Kunt 2006) [1].

But the similar study by ILO on the developing countries show that MSEs contribute less than 30% of employment and 17% of GDP in developing countries. Very specially, Micro, Small and Medium Enterprises (MSMEs) in developing nations contribute 80% to 90% of total enterprises, but they face a number of problems such as absence of adequate and well-timed finance from bank, capital being limited and knowledge aswell , un availability of appropriate technology, less production capacity, ineffective marketing strategy, identification of new markets, constraints on modernization & expansion, non-availability of highly skilled labour at reasonable cost, report on by various government agencies to determine problems etc [2].

Realising that innovation is the engine for national and global growth, employment, competitiveness and sharing of opportunities in the 21st Century, few Governments of certain developing nations have started setting of Innovation Councils, focusing on the creation of Models of Innovation using five key parameters: Platform, Inclusion, Eco-system, Drivers and Discourse and also on fostering an innovation eco-system across domains and sectors to strengthen entrepreneurship and growth, in order to facilitate the birth of new ideas. Industrial/Firms clusters in nature build on hand the excellence labor pool, complementary industries and services and suppliers,

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and to access knowledge flows that facilitate the gestation of novel ideas (Krugman, 1991). To name a few the Silicon Valley in the US, the Formula one cluster in the UK, the tiles industry in Italy, the oil cluster in Houston, US, and the financial centers of London, in the UK, and New York, in the US, the Port wine cluster, in Portugal, follow industry cluster-based development strategies. Hence, in today's world, innovation is of greater importance as it stimulates sustainable growth in a highly complex and competitive market. Researchers and scholars who are gifted are doing research on importance of innovation at large in detail and trying to determine the different parameters that influence its behavior [3].

## 2. REVIEW OF LITERATURE:

Extensive research on Industrial clusters has been going on over the last few decades. These research works to an extent provide information on how important are the clusters with the innovation emphasis for the co-location, proximity to the suppliers or consumers, tapping potential dependencies based on the economies suggested by Marshall's (1920) The research also focuses on the public policies to equip the economies for modernization of industries with innovation through networks.

Accordingly, William Baumol argues that the essence of capitalist progress is not technological change that lowers the costs of producing existing goods and services, but the constant introduction of newer, better substitutes for older products [4]. Schumpeter (1934) argues that the function of an entrepreneur is to reform or revolutionize the pattern of production by exploiting new untried technology and processes. In line with the definitions submitted by Schumpeter (1934), Johannessen et at. (2001) propose that innovation is measurable by the degree of "newness" adopted with respect to product, service, process, market, supply and administrative functions. Of all the innovation applied, the findings by Kannungo (1999) and Sundbo (1998) suggest that entrepreneurs exploit the innovative culture as an opportunity for developing new products or services and penetrating new markets; thus innovation and growth make up a never-ending cycle. Another study by Martin and Terblanche, 2003 reveals that basic values and beliefs of an organization such as tolerance towards mistakes and conflicts which promote creativity and innovation among its members. Hence the management style may have some relationship with one's own innovative qualities. Slavo Radosevic (1997) reports that in transition economies, still there is no regional or national systems of innovation. The emerging systems of innovation seems to be those around business groups and sectors. Johansson (2000) reviewed the identification of factors associated with the integration of econ-design into product development and brought out the successful factors as Management relationships, Customer relationships, Supplier relationships and close supplier relationships, development process integrated into regular R&D processes, competence and motivation [5].

Corsi and Akhunov (2000) claim that the reason for the non-existence of systems of innovation other than these two is the still chaotic process of industrial transformation where national or regional responses are not articulated yet. Rajiv Vastupal, President AIMA, stressed on inculcating innovation in the business school of the 21st century. He said, "By sharing knowledge with the others, once can ensure the reach of the innovation to one and all which will serve the purpose of democratizing innovation". "Today India has three advantages in the form of democracy, demography and technology. These three need to be aligned to let an individual think and innovate and take the idea to all" added Dr.RA. Mashelkar, National Research Professor and President, Global Research, Alliance and Conference Chairman in his theme address in a Conference on Innovation [6]. The Director General of AIM, Rekha Sethi agreed with the speakers that right execution of innovation remains a challenge and that is imperative to look at innovation

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happening at the grassroot level. (Economic Times 26th November 2011 pg.no.5) Innovation is described as the creation or discovery of new solutions, new approaches or new ideas. Both innovation and exploitation of ideas are important forms of everyday practice-based learning. (McGrath, 2001). Innovation is often understood as a simple process of trial and error rooted in experience (Cope and Watts, 2000). There is a suggestion that innovative learning involves experimentation, risk-taking, and variance seeking in what is essentially a creative process (Crossan et al; 1999). Crossan et al. (1999) also suggest that four psychological and social processes of learning occur at these different levels: i. intuiting ii. Interpreting iii. Integrating and iv. Institutionalizing [7].

Pouder and John (1996) call clusters as 'hot spots' of unusually high entrepreneurial activity, resulting in the stimulation of R&D and the introduction of new skills and services. One important feature of clusters is the social interaction and inter-firm cooperation among the clusters. (Balbinot et al., 2011). Jafee, et al 1993 say that through networking with other firms, with both different and complementary specializations, the innovative potential increases and more innovations are likely to be gestated, thereby increasing the likelihood of knowledge spillovers (both intended and unintended spillovers) among clustered firms [8].

**The entrepreneurial orientation (E/O) is the appetite of more innovative, proactive and risky behaviours. (Khandwalla, 1977). Very often,** the countries' institutional environment has not been considered or only a limited institutional environment has been considered. (Ahlstrom and Bruton, 2002). Oxley (1999) explained the organizational surroundings as the set of macroeconomic factors that establish the foundational basis for production and exchange. Firms cluster geographically to benefit from the availability of a quality labor pool, complementary industries and services and suppliers, and to access knowledge flows that facilitate the gestation of novel ideas (Krugman, 1991) [9]. Abid Hussain Abid Hussain 'Expert Committee on Small Enterprises' constituted by the Government of India in December 1995) explicitly endorsed cluster support initiatives as also recommended in the UNIDO clusters survey. , UNIDO prepared a comprehensive project aimed at developing sustainable capabilities at both the local and the national levels to promote SSE networking and cluster development. The report stated: "hub 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. Such public-private partnership would thrive particularly in clusters of small scale enterprise. In terms of Slavo Radosevic (1997), "in transition economies (i.e. the economies being converted to market economies) we still cannot talk about national or regional systems of innovation. The only emerging systems of innovation seems to be those around business groups and sectors [10].

### 3. Problem Statement:

In Ethiopia, there are two development strategies adopted for its growth, first in 1997 and the second in 2011 with the objectives of facilitation of economic growth for equitable development, creation of long term jobs, strengthening cooperation between MSEs, providing the basic for medium and large scale enterprises, promoting exports and balancing preferential between MSEs and bigger enterprises with a new addition of the MSE Development Strategy of 2011 aiming at the inclusion of fresh band of target groups, the graduates, (in addition to its classical emphasis on the poor and less skilled people) to form cooperatives and create their own jobs with a hope of bringing some technological transfer and new corporate management skills to the nation [11]. The creation of co-operatives may not be successful, because of the self-interest of the members and technology transfer is possible within the limited knowledge of the members of the groups.

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But the creation of Industrial clusters is the order of the day for many reasons but the main one is for the sustainability of MSEs. Though there are many ways to interpret the term sustainability such as environmental performance, corporate citizenship, long term business perspectives or all three, innovation in MSEs is a growing priority for business of all sizes. No doubt that sustainability has become an important priority for many business across Europe and North America over the last decade and very specially developing countries presently [12]. Hence an inclusive innovation strategy should be geared towards creating 'more from less for more', as 'frugal, distributed, affordable' innovation that produces more 'frugal cost' products and services that are affordable by people at low levels of income without compromising the safety, efficiency, and utility of such products. Hence the paper would thoroughly analyse what is innovation and how innovations are being encouraged by clusters for the growth of MSEs with the following objectives in mind [13].

## 4. Research objectives

- To study the need for innovation as an important driver of MSEs for its sustainability.
- To discuss the advantages and investigate how the innovation can be inculcated between the MSEs and other industries and institutions through formation of clusters based on the successful cases of clusters of the developing countries.

## 5. DISCUSSION

### a. ECONOMY AND MSMES

Development economists distinguish three major states of development, in the first state, the economy specializes in the production of agricultural products and small-scale manufacturing, marked by high rates of non-agricultural self-employment. The second state, the economy shifts from small-scale manufacturing to large-scale manufacturing, the state marked by decreasing rates of self-employment and the third state of economy is characterized by the shift from manufacturing to services.(Syrquin.M 1988) [14]. Hence, in the third state, there would be an increase in entrepreneurial activity, and this has been confirmed by more recent studies for most developing countries in the 1970s and 1980s. The traditional analyses of development tend to focus on large corporations, neglecting the innovation and competition in small scale sector. The focus of an entrepreneurial economy is on change. Entrepreneurial activity in developed countries needs to focus on high-value-added, high technology, innovation, technology commercialization and education. The developing countries should have the balanced approach of the national framework conditions and entrepreneurial framework conditions, even at the level of micro-entrepreneurship [15].

At a worldwide level, the inclusion of MSEs for the integrated community development is an important component, for the reason that the these enterprises create jobs, supply low-cost goods and services and services for the poor and finally the supply of surplus to the large industries. (Kirkpatrick and Hulme 2001). No doubt that MSEs development has been widely adopted as anti-poverty strategies internationally [16]. The microenterprises provide a meeting-point between neo-liberal advocates of private enterprise and the market as creators and distributors of resources, grassroots practitioners' For self-development to work in one's life, it should be paradoxical that it is usually initiated and promoted by someone else.

Thus the self-development depends upon the development practitioner, and the developments can be called as grassroots development, bottom-up development, participatory development, community development etc.,. The skills, knowledge, expertise, and rights of those who need self-development need to be acknowledged by the local organization/social organization/development practitioners/country (Annis and Hakim 1988) In most of the developing nations, ecouraging the growth of MSEs is seen as being an

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important plank of industrial policy [17]. Apart from creating job, improving welfare, alleviation of poverty, increase of income, the important reason for the importance to be placed came after the failure of large scale manufacturing sector in meeting modernization. Hence, in the developed nations and the developing nations, clusters and networks are central to the industrial restructuring framework with the two notions – 'flexible specialisation' and 'new competition'. The operation of clusters is important for MSEs where is abundance of labour. (Schmitz 1989). The clusters offer MSEs external economic advantage with economies of scale through sharing of information, resources, knowledge and technical expertise which enhance competitiveness among the MSEs.

Apart from that the clusters offer a potential growth – a competitive and sustainable growth. Krugman (1991) argues that clusters are attracted by the self-perpetuating system which encourages the firms to co-locate [18]. The benefits that emerge from the combination are specialized factor inputs, access to infrastructure and supply of intermediate products. There are other benefits which arise due to the institutional theory resulting in the shared reputation, legitimacy spillovers, knowledge spillovers and the relative abundance of resource endowments. (Saraceni and Andrade Júnior, 2012).

Innovation cannot alone augment job creation, but it is the competition between rival firms in the cluster that drives growth because it forces firms to be innovative, improve and create new technology and then result in the job creations. Thus, the potential for new innovations is likely to be higher within clusters, where there are multiple resources, knowledges, and capabilities come into contact, than outside clusters. Or in a broad proposition form: firms in clusters are more likely to be more innovative than firms that are not clustered.(Jafee, A. et.al (1993) [19].

### b. INNOVATION AND CLUSTERS

Innovations are being seen as the currency of the 21st century, as they will impact the competitive advantages in business and markets by providing answers to the most significant challenges facing the world. Innovations result out in opinion differently, creatively and insightfully to make solutions by adding to the social and economic value. It can redefine everything from products, processes and services to individuals, organizations, public and private sector and institutions. The innovation is driven by people, culture, technology, eco-system diversity and opportunities and the interaction among these elements.

Innovations are also being treated as an instrument of creating sustainable and cost effective solutions for and by people at the bottom of the pyramid (BOP) and also it is focused on absorbing hidden innovations in the service sector and MSEs. In theory and practice, there are different types of innovations with different characteristic features. There are different aspects of defining and measuring innovation. In a narrower sense, innovation seems to be of two categories, product and process innovations. In a broader sense, it means to refer economic, organizational and social aspects [20].

A Cluster is defined as "a geographically bounded concentration of similar, related or complementary businesses, with active channels for business transactions, communications and dialogye that share specialized infrastructure, labour markets and services and that are faced with with common opportunities and threats" Rosenfeld (1997: 10) Another definition was given by Doeringer and Terkla (1995) as "geographical concentrations of industries that gain performance advantages through colocation" and Porter (1998) perceives clusters as a concentration of related firms, suppliers, service providers and institutions connected to a certain industry, that are tied by common externalities that emerge from being

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embedded in a cluster" [21]. According to this, clustered firms are grouped within a fairly compact geographic area giving the benefits arising from interactions amount relationships as competitors, collaborators, buyers, suppliers etc., encouraging innovation. Morosini (2004) gives another definition by describing the clusters as ---socioeconomic entity characterized by a social community of people and a population of economic agents localized in close proximity in a specific geographic region.

Clusters as a strategy of area-based particularly for the development of small and micro enterprises, has gained momentum in both developed and developing worlds. Presently they are large in numbers and called by different names as General Industrial Parks, Product Specific Industrial Parks such as Textiles, Food Processing, Information Technology, Industrial Estates, Special Economic Zones (SEZs) and Cluster Development [22].

### c. Types of Clusters for Innovation

Clusters are formed with different resemblances. They consist of a multitude of firms of different sizes belonging to one branch of industry, they are broadly defined. Very interestingly, Markuesan (1994) has classified clusters into four categories – Marshallian, hub and spoke, satellite platform and state anchored [23]. This classification is based on the role of different cluster members and the interaction between them,

The following Table 1 explains the classification with their characteristics

**Table 1: Markuesan's Typology of Clusters**

| Cluster type | Characteristics of member firms | Intra-cluster interdependencies | Prospects for employment |
|---|---|---|---|
| Marshallian | Many small, innovative, medium- sized and locally-owned firms well embedded in the regional social dynamics. | Substantial inter-firm transfers, joint R&D efforts, pool of assets for fulfilling clients' orders, in a milieu munificent in institutional support. | Dependent on the dynamism of the cluster given external evolutions. Regional entrepreneurship. |
| Hub-and-spoke | One, or a few, large firm – possibly oriented to external markets - that is surrounded by many small suppliers and service provider firms. | Large firm(s) dictate the terms of the business relations with the smaller firms in the surroundings. Few interactions among spoke firms that are focused on their ties to the hub firm. | Dependent on the evolution and success of the large hub firm(s). |
| Satellite | Driven by branch-plants – possibly subsidiaries of large multinationals. | Low level of inter-firm contact and very limited inter-firm ties in the cluster. | Depends on the growth of the branch plants and the success of the public policies adopted to attract more firms. |
| State-anchored | A government owned or supported, usually not for profit, entity surrounded by related suppliers and service firms. | The anchor institution is central to the majority of the inter-firm ties but there may coexist significant exchanges among co-located firms. | Depends on the public policy and the relative ability of the anchor institution to attract additional political support and funding. |

**Source: Innovation and Clusters- An Hand Book**

### i. Marshallian Clusters

Under this type, the employee mobility across firms in the region make knowledge resemble a "local public good" – as expressed by Markusen (1996: 299) as "the secrets of the industry are in the air". (Fig 1)

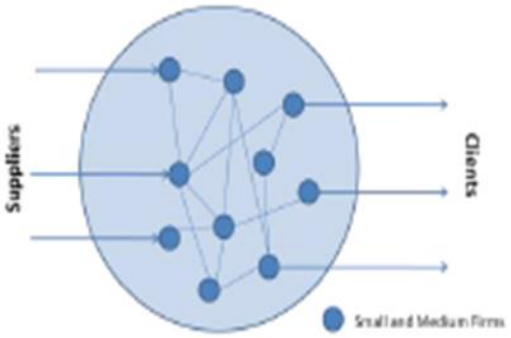


**Fig 1. Marshallian cluster**

Proposition 1.a. clusters are likely to generate essentially small product and process innovations. Proposition 1.b. clusters are likely to correct a small division of their innovation rents that are common with the other firms in the cluster.

### ii.Hub-and-Spoke districts

The hub-and-spoke sort clusters have few leading and externally oriented firms surrounded by manifold smaller suppliers. Few examples of these include Seattle, in the US (Boeing) and Toyota City, in Japan (Toyota) [24].

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However, employees' movement is significantly lesser than in the Marshallian type, and the hub firm imposes the terms of the exchanges with the local spoke firms. The hub firms under this model, are large firms that have the capacity to patent any significant innovation to protect the property rights and that have the financial resources to enforce their rights. (Fig 2)

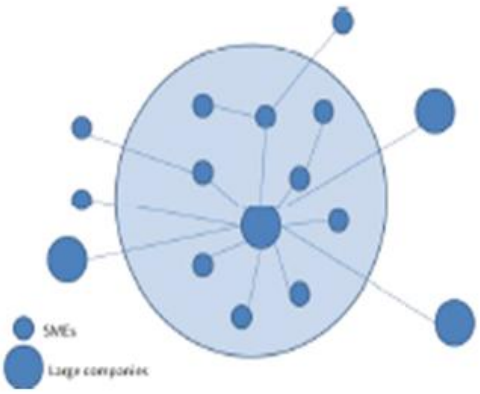


**Fig 2. Hub-and-Spoke districts**

Proposition 2.a.The leading firms in hub-and-spoken-type clusters are likely to impel the innovations generate whether they are developed in-house or by other independent firm in the surrounding milieu. Proposition 2.b. The overriding firms in hub-and-spoke-type clusters are likely to fitting the maximum of the rents from innovation, regardless of whether they developed the innovations [25].

### iii. Satellite platform clusters

The satellite platform clusters consist of an "assemblage of unconnected branch plants [subsidiaries of multinational firms] embedded in external organizational links" (Markusen, 1996: 293). These cluster formation needs public policies in order to attract foreign MNCs. The best example is the case of the clustering of unrelated research facilities of large multinational corporations in the Research Triangle Park, in North Carolina, US The source of knowledge for the innovations does not require local content, rather it comes from the head-quarters and sister subsidiaries from the multiple sites in the world [26]. And in this cluster, the innovator that will appropriate a very large share of the rents accruing from innovation. (fig 3)

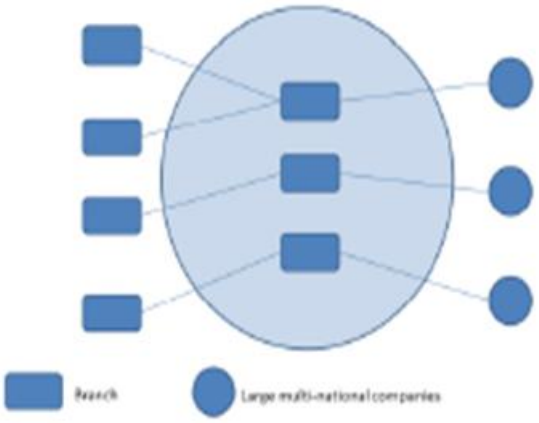


**Fig 3. Satellite platform clusters**

Proposition 3.a. Firms in satellite platform-type clusters are expected to create innovations separately in-house or with added sister subsidiaries.
Proposition 3.b. Firms in Satellite platform-type clusters are prone to proper full rents through their innovations.

### iv. State-anchored clusters

These cluster are formed through location decisions of a major research center, or a university, or a military base etc., which anchor the local economic activity and they are government-funded institutions, decisions may come from outside the region or be dependent on public policy choices and political shifts. Large number of suppliers may emerge around these large organizations, with which they establish short-term contracts. (Fig.4) The innovation cluster of this type of cluster may extend to different activities such as cities that grow around Universities, such as Montpellier, in France [27].

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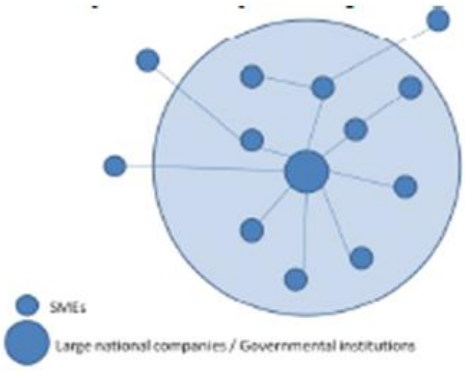


**Fig 4. State-anchored clusters**

Proposition 4.a. Firms in state-anchored-type clusters are likely to generate innovations that are specific to the anchor institutions and the innovators will be the anchor or a legally contracted firm. Proposition 4.b. The anchor firms in State-anchored -type clusters are likely to appropriate the majority of the rents from innovations.

### d. Development of Clusters for MSE's Growth for Sustainability:

According to Schumpeter (1950) innovation results when different combinations of existing resources are found to have superior benefits. Innovation is increasingly a social phenomenon and not the outcome of individual actions Many innovations are actually the outcome of pooling together different resources and knowledge. Due to this reason, innovation is an for firms' competitive ability and is the mechanism through which firms gain access to resources with positive future value, and to valuable new resource combinations that are specific to the firm [28]. However, innovation is also becoming increasingly dependent on the interaction among independent firms that contribute with complementary resources (Breschi, 2000; Balbinot, et al., 2011). While dealing with the formation of clusters, proper care should be taken to the unity of supporting industries, universities, research centers etc., Clusters are considered important for MSEs development. which are producing and selling a range of related and complementary products and services. Sustainability is the inclusion of financial, environmental and social concerns into business decisions. It results in the creation of long-term financial value and sustainable companies are aware of the impact created by them on the environment, take care about their employees, customers, communities and work to make positive social change and understand these three elements are intimately connected to each other [29].

According to Khalid Nadvi there are Eight points in the checklist for supporting MSEs in Industrial Clusters and Networks which are given as:

- Identification of existing clusters and networks of MSEs, however nascent. These type of production organisation cause noteworthy economies for diminutive producers, persuade backward and forward linkages and raise prospects for collective action.

- Attention of policies on the groups of producers and not just small firms. Furthermore, intervention needs to be targeted, sector specific and strategic.

- Center of attention on demand-led-product markets and the importance that they approach namely achieving competitiveness on the basis of quality consciousness, sensitivity, consistency rapid delivery and not price alone.

- Concentration on institutions and instruments that facilitate the inter-face between producers and the market, such as trade fairs, export visits and external buyers, for accessing marketing information, product development, fashion trends and for acquiring technical know-how.

- Supporting local and sectorial institutions that provide producer services such as technical training, technology support and market

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information with the help of local levels of government .

- Use of mega firms as vital agents of change by promoting supplier upgradation programmes.

- Working towards a macro-economic framework that provides for a levelled playing field and an incentive structure that allows MSEs to operate on fair terms.

- The instances where policy agents have acted as facilitators and enablers there intervention appeared to be more effective. This gives range for private initiatives and entrepreneurial energies to fortify the progress of clusters and networks.

Hence for a sustainable innovative cluster formation, Innovation should be treated as a critical driver for increasing productivity and competitiveness, for poverty alleviation through collaborative approaches and inclusive growth. All over the world, innovations in diverse areas such as science, politics, education, businesses can result in the solutions to save fast depleting energies like food, water, healthcare access, education and affordable housing,. In this background, the pioneering strategies and actions started by governments, educational institutions, industry, communities, regions and nations are vital to every country. For example, the Government of India declared 2010 as a Decade of Innovation, in order to create a roadmap for innovation for the country. This initiative in Innovations has led to creating a roadmap, but with a focus on inclusive innovation, keeping in mind the unique needs of India and its challenges of demography, disparity and development which is necessary for its competitiveness. Accordingly, India set up National Innovative Council (NInC) focuses on the following inclusive innovative activities:

- Finance innovation for the bottom of the pyramid (BOP) through the creation of an India Inclusion Innovation Fund;
- Creation of Industry Innovation clusters for jobs and productivity leading to sustainability.
- Spread of rural broadband to Panchayats
- Creation of innovation ecosystems at Universities through University Innovation Clusters.
- Promotion of Innovation Portal
- Creation of State Innovation Councils in each State, and Sectoral Innovation Councils aligned to Union Government Ministries;
- Set up of twenty Innovation Design Centers co-located in existing institutes;
- Encouraging Inclusive innovation;
- Share of knowledge through Global Roundtable on Innovations.

In order to make the innovation inclusive in the policies for the entire gamet of development of Industries, India has adopted the following strategy as given in the Fig 5.

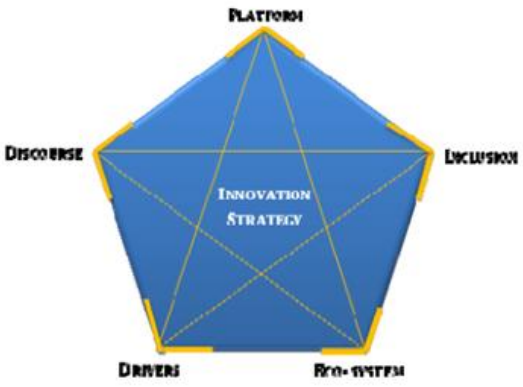


**Fig 5. Inclusive Innovation Strategy**

**Platform:**

It is which helps to re-define innovation to come out with new products, services, technologies, processes, structures using the old ones. Focus would especially be on creating policies at the Government level by facilitating innovations at the right points, as well as easing service delivery. And these are called disruptive innovations and public policy would analyse process re-engineering for service delivery, accountability initiatives, and the HR strategy of the

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Government through Research and Development, Science & Technology, Governance, and National/ State/ Sectoral Councils.

**Inclusion:**

The hub of the policy is using innovation as a device to eradicate discrepancy and meet the desires of loads of in the best likely manner. This strategy is required for 'frugal innovation' that produces more 'frugal cost' products and services that are reasonably priced by people at low levels of incomes without sacrificing the safety, efficiency, and utility of the products. This stress on Inclusive innovations requires consciousness, right of entry Affordability, ease of use, scalability, Sustainability, Quality, Pervasive Growth, Innovations for/by the people and Innovations for the Bottom of the Pyramid.

**Eco-system:**

An pioneering eco-system must make easy the creation of new ideas and also provide platforms for the successful exploitation of these ideas through the interactions within and transversely players such as Government, firms, schools/education and research institutions, finance, individual innovators, customers/users, NGOs and media not become a liability.

**Drivers:**

The innovation strategy focuses on creating environmentally sustainable solutions that view nature as a source of nurture by creating locally relevant solutions, but which are globally competitive and use global resources as well. This necessitates modern ways of thinking about innovation, where universal resources can be engaged to satisfy the needs of one and all .

**Discourse:**

this is to expand the discourse of innovation to give room to alternative dialogue, which often creates bypasses in the system to improve existing things. This is done through discussions, debates, seminars, conferences, best Practices, alternative Dialogue, re-thinking, new ideas, media and Innovation Portal

**e. A Case Example of Tiruppur**

**An Overview of the Tiruppur Knitwear Cluster:**

Tirupur popularly known as "Banian City" of the South India is located 60 kms away from Coimbatore city. It has grown a long way from a small cotton-marketing centre with a a small number of ginning factories to turn out to be a prominent cluster of small and medium manufacturing enterprises gainfully engaged in the production and export of a range of knitted apparels. This township started with the production of low valued cotton hosiery items, mainly the under garments during the 1930's. Knitting to this city was brought by Mr. Gulam Kadar in 1937. He established "Baby Knitting Industries" in Kaderpet area of Tirupur then second knitting unit was established by a woman, Mrs Chellammal, in the name of Chellemmal Knitting.

The growth of knitting industry in Tirupur can also be recognized to the breakdown of agriculture crops over a period of time and the availability of yarn, the basic raw-material for knitting from the nearby mills in Coimbatore. A few people also suggest that the dry climatic conditions in the area also helped the growth of this industry. Before knitting the agricultural labourers were already exposed to the hand-woven textiles because of Khadi movement started by Mahatma Gandhi. That also helped them to get into to the knitting process of textiles. Started in 1930s as undergarment suppliers to domestic market, the number of knitting units reached around 450 in 1960. At the centre of the Tiruppur cluster are the cotton knitwear garment manufacturers. These consist of three types of "producers": first, manufacturing exporters; second, merchant exporters; and third, non-exporting manufacturers.

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While each category has large, medium and small units within it, the first and second categories "dominate the scene control (formally and informally) a variety of enterprises spanning both horizontally and vertically" related ties. The third category, namely non-exporting manufacturers, undertake subcontracting tasks for firms in the first and second categories, and sell to the domestic market. These units tend to be somewhat smaller, and to produce simpler items (i.e. white men's vests) which are easier to cut and stitch and do not need dyeing. In expansion to the various manufacturing and fabrication units, there were also an estimated 600 processing units, 300 printing units, and over 100 embroidery units in the cluster in 1993 (Swaminathan & Jeyaranjan 1994). Started in 1930s as undergarment suppliers to domestic market, the number of knitting units reached around 450 in 1960. Tirupur cluster comprises of around 5000 units which are involved in one or the other activities of Textile value chain.

There are no precise data available as to the exact number of units in the different areas of value chain. However the growth of the Garment industry as a whole can be traced to the specialisation of different activities upto the stage of garmenting in Tirupur. Such specialisation has given the required cost advantage to compete in the international markets A notable feature of the industry in Tirupur is its organization in house hold workshops started mostly by owned funds of enterprising individuals. As the industry has developed as a faculty business, the entrepreneurs have developed highly specialized skills and aptitudes which have helped them to seize the quota generated opportunities of supplying to overseas demand.

**Predominant features of Tirupur Textile Cluster:**

- Cotton based knitted garments
- Majority of the units being in the proprietorship/partnership firm of organization controlled and directed by family management.
- Large number of units is involved in doing cutting, making and trimming knitted fabrics in pieces.
- Limited number of vertically integrated production units and a high degree of subcontracting relationship to knitting, processing and finishing operation.

Tirupur textile clusters are producers of essential knit garments for lower end of the domestic market, so today is considered has a diversified production range comprising, T-shirts, polo shirts, sportswear, sweat shirts, ladies dresses, children garment, nightwear, etc. This cluster reflects high degree of specialization in most areas including machinery supply besides every area of the manufacturing operation. Innovative business development services such a pre-production checks, initial and during production checks, product consultancy, laboratory testing, sourcing assistance are provided by several enthusiastic entrepreneurs that help the industry to improve.

There are 15 dynamic industry associations, which are functioning worthy role in helping the firms by playing quasi-judiciary role to settle various inter and intra firm disputes besides procedural formalities, information assistance and the lobbying role with the government. The important growth factors of this cluster are pro-active marketing, adaptation to latest technology and inter firm production arrangements. However, the major issues that concerns this industry for the sustainability of growth in the future relates to infrastructure and organization matters together with the challenges faced by the WTO impact.

Water scarcity, electric power supply and increasing pressure on the roads have put considerable strain on the growth of this cluster. With the firm increasingly moving towards higher value addition, quality and design inputs are becoming more crucial. However, the industry has grown considerably over the last one decade by considerable joint initiatives by firms through associations and government support.

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Currently, various infrastructural development activities directed towards textiles industry have been initiated by the Government and other trade promotion bodies and industrial associations.

### Innovations Achieved & Planned:

The cooperative Strategies adopted by the industry, Trade Promotion Organisations, Financial Institutions and the Government have led to various innovative measures. The formation of Special Purpose Vehicle (SPV) for massive infrastructural project is an admirable example of innovativeness in the development of Tirupur. There are also few instances of innovation that are noticed. It has been continuously reiterated that entrepreneurial skills and technical skills are important factors leading to the success of this industry in Tirupur. To imbibe these qualities, an innovative approach has been taken by one of the institutions, Kumaran Kalvi Kazhagam which runs Vivekananda Vidyalaya. This school gives the exposure to the school children about the various aspects of textile industries and the need for more entrepreneurs in this industry from the sixth standard of the school. In fact, such a creative initiative can sensitise the young brains about the industry.

### f. Challenges

Different types of clusters are likely to have different impact on the regional and national economy and the creation of jobs, depending upon the designing and implementation of effective legal and regulatory norms that promote and protect innovations and it is not direct Innovation alone will not be sufficient and MSEs need to capture the benefits from innovation to succeed and continue innovating (Bowman, 1974; McGrath, et al., 1996). In terms of capturing the rents from innovation, small firms are less likely to protect their innovations through patents. The innovations are often small and fairly explicit - they involve minor adjustments to the product or process, and the innovator is unable to extract additional rents from clients.

Third, when the innovations are more "visible" it is possible that the social control mechanisms allocate a substantial share of any additional rents to the innovator. Fourth, because the firms in the cluster share a similar architectural knowledge (Tallman, et al., 2004) they have similar absorptive capacity and are easily able to understand and implement small innovations. The probability of innovator being capturing more than a "fair" share of any innovation rents is quite less. It is certain that the hub firms will be able to incarcerate the rents from innovations, whether these innovations were generated in-house or by a small, and non-dominant, supplier. In these circumstances the dispersion of the innovation contained by and outside the cluster curtails the innovator from assuring a continuous stream of rents.

When firms are largely stand-alone operations, with scarce exchange flows with other co-located firms, imitation is more difficult. It is not rational to expect firms will devote substantial human, physical and financial resources to innovation if potential future rents steaming from their innovations are preempted by competitors or collaborators. It is crucial to understand the different dynamics that exist in the cluster in order to figure out ex ante the benefits and hazards of operating in the cluster, including in concerns innovation output and the allocation of rents from innovation. The speed of imitation by competitors is a dangerous characteristic of ineffective protection mechanism which increases the competitors' ability to access.

### Conclusion

The main task for the formation of MSEs innovation cluster depends upon how can in-house expertise be developed with limited time, finances and human resources in order to position them as competitive advantageous tools. Economic development using cluster models involving innovation has become order of the day adopted my economies for regional development and competitiveness.

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However the success of clusters depends upon the inter connection of factors and their impact on the cluster.

## Areas for further Research

Innovation as the fundamental driver
Cluster based approach for competitiveness
Innovative Inclusive Strategy for MSEs
Technological Innovation Vs Social Innovation
Types of Innovation
Sustainable oriented Innovation (SOI)
Public policies for Innovation through clusters

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