Tripura Bamboo Mission: Cohesive Power of Small and Medium Enterprises

Tamanna M. Shah
IL&FS Education
India

Abstract
Small and medium enterprise (SME) clusters are social and cultural conveyors of community cohesion, welfare, and self-actualization. SMEs are more relevant in areas, which are located in geographically difficult to reach regions that are still wedded to their traditional practices of eking out a livelihood from natural resources. They help transform tribal handicraft communities into dynamic economically sustainable clusters through innovative knowledge bases, pro-poor growth strategies, and appropriate market development. Tripura Bamboo Mission (TBM) in India is one such market driven, community-based intervention that has remarkably enhanced livelihoods of tribal communities who had missed the development race in a VUCA world through knowledge, innovation and transformative action. Tribal communities in Tripura had been subsisting on traditional methods of farming based on burning of bamboo jungles and shifting plantations degrading their natural habitats and perpetuating a situation of hopelessness. In such a scenario, TBM interventions publicised the potential of bamboo crop for a variety of value-added products and numerous profitable applications to make it a source of dispersed employment generation and economic activity. Based on a case study approach, the paper assesses the impact of TBM on artisan families’ income, entrepreneurial advancement, and social empowerment. Analysis also demonstrates a ‘ripple effect’ that connotes reverberating positive impact tribal women have on their families and communities. The aim is to measure TBM’s impact and also identify ways to up-scale its universal application among other such communities straddling India’s tribal landscape.

Keywords: Small and Medium Enterprises, Cluster Development, Tripura Bamboo Mission, Social Impact
Introduction

“Clusters are not unique, however; they are highly typical - and therein lies a paradox: the enduring competitive advantages in a global economy lie increasingly in local things - knowledge, relationships, motivation - that distant rivals cannot match.”

Porter (1998a)

Small and Medium Enterprises (SME) are powerful vehicles that drive the growth of the Indian economy. SMEs depend on the indigenous knowledge of the tribal communities and harness the untapped potential in rural areas. Since independence, particularly with the inception of five year plans, concern for tribal development has always been high on the Government’s agenda. As local growth engines, the SMEs augment the sustainable economic development of the tribal areas. They have the capacity for innovation, are a source of job creation, and fuel entrepreneurial spirit and innovation in the tribal artisans thus fostering competitiveness and employment.

Bamboo crafts are one of the oldest traditional cottage industries of India providing livelihood to the tribal societies within the country. The manufacturing units are mostly located in rural and small towns, with a huge market potential in India and abroad. India Export Promotion Council for Handicrafts (EPCH) reported growth to be at a rate of 10 per cent for the handicraft exports in 2017 compared to 18.3 per cent in 2016, owing to the demand from global markets, especially in Latin America, Europe and the Middle East.

Tribal artisans earn their livelihood by undertaking shifting cultivation and supplement it with income from other activities like handicrafts. The tribal communities in these remote areas are largely cut off from the developments of the globalized world, yet have to bear the consequences of being rooted in the old practices and not keeping pace with the changing times. They continually battle the growing challenges with little capacity and means to overcome them. In 1991 with the ensuing globalization in India and the massive storm of increased competition, communities were rendered defenceless in the face of Vulnerability, Uncertainty, Complexity and Ambiguity (VUCA).

VUCA amplified the challenges for the artisans with greater competition that made their knowledge and skills become increasingly redundant. With a fragmented sector and small-scale craft production mainly done for local and self-consumption, artisans find it difficult to compete with sellers from across the globe with their traditional products. Due to lack of product and process innovation the artisan products were undervalued in the global market. Eventually, artisans had to commoditize the traditional products and these could no longer be produced in isolation.

It is at this point, that the uniqueness of the tribal bamboo handicrafts was captured and value added through TBM, which made the SMEs in the tribal communities powerful economic agents of economic development in Tripura. Such economic expansion has also had a social implication where the importance of SMEs as social and cultural conveyors of self-actualization, social cohesion, and community welfare is recognized. To further the development of SMEs, the government introduced a cluster-based approach to make artisans self-reliant and productive for the economy. It aimed at enhancing their economic well-being independent of overall quantitative economic success. Cluster approach in rural economic growth takes into consideration a holistic community development through enhancement of traditional skills and
knowledge base, pro-poor growth strategies, and necessary market development to sustain such a growth. Clusters value adds the traditional products and offer competitive pricing in the global market. This paper, therefore, assesses the socio-economic and cultural impact of TBM on the tribal artisans of Tripura.

Why Bamboo?

The entire region is rich in natural resources and alternative livelihoods. Hence subsistence is primarily based on the exploitation of these natural resources. One such natural resource abundantly available in the state is ‘bamboo’ which in local lore is also known as ‘green gold’. Bamboo has the properties of being developed or be manipulated into various types of value-added products for the greater economic benefit through dispersed employment generation and social development. Bamboo thus provides the necessary resource base for expanding small and medium enterprise sector that would generate employment and income to alleviate poverty in the neglected rural areas and communities. With such properties, bamboo can be considered as an excellent entry point for poverty alleviation programs and initiatives.

The local environment also greatly facilitates the establishment of new enterprises, business ideas that contribute to the success of the region, generating a virtual multiplier effect, which in turn leads to rapid inclusive growth. The district can thus be viewed as a nursery that not only feeds the companies in respect of their business needs but also constitutes a laboratory for testing new schemes of social cohesion and innovative ideas in terms of labour organization.

Tripura Bamboo Mission as a Sustainable Design

Tripura constituted the first state bamboo policy in the country, namely, ‘Tripura Bamboo Mission’ (TBM) in 2006 with a focus on enhancement of turnover of bamboo sector coupled with provision of livelihood opportunities. The Mission achieved its objectives through a cluster development approach involving institution building, industrial linkages, and better market and credit facilities coupled with resource upgradation. To improve the efficiency of the Mission and develop a contemporary and dynamic work culture, the state Government implemented the mission in a Public Private Partnership (PPP) mode. In the year 2007, it engaged IL&FS Cluster Development Initiative Limited as the project implementing agency (PIA).

TBM has a ‘Farm to Market’ approach and aims to optimize the end-to-end value chain (process innovation) spanning from plantation and resource generation to marketing of value added finished products (product innovation). The initiative leverages market link through various entrepreneurs in the five major sub sectors of bamboo like incense sticks, bamboo mats, utility handicrafts, bamboo furniture and a host of industrial products.

Through this design TBM aims to achieve multi-pronged objectives. It discourages shifting cultivation among the tribals. Second, it boosts the turnover of the Bamboo sector and thirdly, to provide the communities with a sustainable livelihood.

Literature Review

Global to Local

The VUCA world not only affects the individual but also the tribal communities. As a result of free trade and dumping, domestic production and sale of products declined and people struggled to make a living from the traditional designs. A complex supply chain with too many intermediaries from raw material procurement to the sale of products exacerbated the impact of VUCA. However, while the markets were made accessible through globalization, the importance
of territoriality (location and geographic distribution) was not lost either. There exist contrasting views on the significance of location for economic activity post globalization. Some scholars believe that globalization renders location irrelevant and it marks the ‘end of geography’ (O’Brien, 1992), the ‘death of distance’ (Cairncross, 1997) and the ‘delocalisation of economic and social relationships’ (Gray, 1998). Others argue that globalization promotes “greater regional economic distinctiveness, and that regional economies rather than national economies are now the salient foci of wealth creation and world trade” (Martin and Sunley, 2003, p.3). Territory, therefore, has an “ability to organize its development in an increasingly globalized economy” (Beauvia - Ripert et al., 1993, p.2).

In order to enhance localized productive capacities, economic actors (entrepreneurs and corporations) across the globe developed new forms of economic coordination. Such economic coordination demands fostering reciprocal understanding and mutual cooperation among the agents of regional development by focus on human and social capital, and formal and informal norms.

A. Marshall (1890) in the Principles of Economics envisioned such a region where the business structure is comprised of small locally owned firms that make investment and production decisions locally. He believed that “specialized industries in particular localities or industrial districts” benefit from the fact that “The mysteries of the trade become no mysteries; but are as it were in the air” (p. 271). He viewed the district as a relatively stable community which enables the evolution of a strong local cultural identity and shared industrial expertise.

It is here that the association between the tribal artisans of Tripura and the authorities is facilitated through a cluster-based approach, to create a social partnership of sustainable value. Such a partnership, with shared commitment to orchestrate collaborative actions and decision-making helps artisans compete in the VUCA world. The localized production system is often “conceived as a set of interdependent activities that are technically and economically organized and territorially conglomerated” (Maillat, 1998, p. 117). The participants under TBM share and develop collectively and form hubs which generate new ideas and technological progress. Scholars argue that competitive advantage is a result of collective outcome rather than an individual process. Such a “grouping of economic, social, political and cultural elements” forms the innovative milieu (Maillat, 1998). Innovative milieu or collective learning was first introduced by the Groupe de Recherche European sur les Millieux Innovateurs (GREMI) (Camagni, 1991).

But what is fundamental to note here is that “the localized production system is actuated by a territorial logic [environment] (milieu)” corresponding to “the technological and market environment” (Maillat, 1998, p. 117). Crucial to such systems is ‘networking’ or the process of interaction and learning among the agents, making the milieu innovative. Scholars argue that clusters and the network of SMEs reduce uncertainty, maintain competitive advantage and foster innovation. It is this collective process undertaken by the private, public, and collective organizations that develops the local environment and forms the basis of an innovative milieu. The innovative milieu provided by TBM encourages collaboration, both internal and external and gives rise to solidarity among the participants.

Artisans, as a result of globalization and the ensuing VUCA conditions, had to commoditize the traditional products since these could no longer be produced in isolation. Such a change came to be viewed as a destruction of the indigenous knowledge base and tradition, but in fact was just an accommodation. Ronald Robertson calls this ‘glocalization’. The global culture does not replace the local or assimilate the local culture into global one, rather just
accommodates to produce a hybrid culture. Robertson argues that the ‘glocalization’ theses emphasizes that “it is a process of the global creation of the local and, moreover, the localization of the global” (Matheson et al., 2006, p.4). In many regions of the world, artisans have been identified as the second largest sector of rural employment after agriculture (Basu, 1995 cited in Seung-Eun and Littrell, 2003, p. 357). Further, “as a means of livelihood, handicrafts provide an ideal avenue for creative, independent entrepreneurs” (Morris, 1996, p. 4). In addition, they offer opportunities for seasonal employment and small production processes, and the sector is often a default occupation for producers who have limited options for employment.

Porter and Kramer (2011) argued that working alone and having a narrow approach to business tends to ignore the societal, environmental and economic aspects. Instead they suggest that companies and communities should work together for a common purpose of creating ‘shared value’ – “generating economic value in a way that also produces value for society by addressing its challenges.” A shared value approach reconnects company success with social progress. One way of achieving the shared value is by building a supportive industry cluster.

Clusters, therefore, lend themselves to poverty concerns directly - through employment, income and well-being generated for the working poor, and indirectly, through their wider impact on the local economy. Within a cluster, firms create and exchange knowledge through face-to-face interactions. SME clusters offer dynamic efficiency gains as a result of “greater capacity utilization, greater specialization, enhanced technological capabilities, greater learning by doing, higher process and product innovation” (Rabellotti, 1999, p.1572).

As a result, governments now formulate regional development policies based on industrial clusters that promote innovation and networks of cooperation “as a tool for regional competitiveness” (Diez, 2001, p. 909). The clusters of SMEs are engines of growth and development of the regional economic systems. It is the implementation of these interventions in collaboration with the ‘capitals’ at the disposal of the community and the organizations that facilitate the innovation process. An artisan cluster under TBM is a geographically concentrated (mostly in villages/townships) household unit that produces handicraft/handloom products. In a typical cluster, such producers often belong to a traditional community, producing the long-established products for generations.

Indian SMEs have tremendous potential to generate income and employment for the country. Despite structural deficiencies that hinder effective and profitable participation in the global markets (Peres and Stumpo, 2000, 2002), SME clusters have the potential to upgrade the value chains and facilitate better market linkages and subsequent socio-economic development. Clusters result in externalities or ‘collective efficiency’ originating from the constant interaction of economic actors on various industrial activities (Schmitz, 1999). This helps organizations and localities gain more comparative advantages in the face of global competition (Schmitz, 1999).

Clusters and the Five Capitals Model

To cope with the changing global environment, the Indian economy in 1991 adopted new reforms and introduced the Liberalization, Privatization and Globalization (LPG) model with which rapid changes in the dynamics of production and trade took place. Gradually, a significant proportion of trade was conducted through coordinated value chains with globally acting suppliers, decreasing transportation costs and emerging new destinations. Firms engaged in global production networks provide opportunities for economic upgrading by engaging in higher value production or repositioning themselves within the value chains. In labour-intensive industries, such an expansion generates employment opportunities especially for women, migrant
workers and poorer households (Raworth, 2004). Participation in the value chain leads to the socio-economic development of the producers “through enhancement of skill, product development, added value in product and chain, technology development, business enabling environment through better policy and linkages with markets” (Arshad and Reza, 2012).

Improved business relations, as a result of collaborative efforts under TBM provide smallholders with higher income benefits, improved access to critical services for production, and more stable market relationships. Cluster development under TBM is based on the principle of ‘collaborating while competing’. It is market driven, inclusive and collaborative. The wonder plant is intimately interwoven in the socio-cultural fabric of the state. Bamboo-based economic activities are an intrinsic part of the life of the people. TBM also aims at the development and implementation of a sustainable community based production model with concomitant benefits for forest conservation.

Methods of Research

The impact of TBM is based on a conceptual understanding of the Sustainable Livelihood Analysis (SLA) framework as suggested by the Department for International Development (DFID, 1999). This approach was used to identify asset ownership, strategy implemented and outcome achieved, institution influenced and vulnerability context faced by hard-core poor households in sustaining their livelihoods. The questionnaire was divided into eight parts, namely socio-demography information, human asset, physical asset, financial asset, social asset, natural asset, food security and health status. This was substantiated through an in-depth case study exploring the nature and levels of productive capital asset development. Impact pathways were then analyzed for TBM to understand what changes have occurred since its inception and how the positive impact can be enhanced and policy changes be made to reduce any negative effects.

Findings and Discussion

In proposing TBM as a sustainable design, IL&FS Clusters provided for a socially cohesive environment following the path of the 3Es, that is, Education, Employability and Employment. These are the pillars that support such lasting reforms. To highlight the impact of these reforms, the 3Es and various livelihood strategies have been aligned with the five capitals of the sustainable livelihoods framework to achieve sustainable development that finally leads to individual and community empowerment. This will help demonstrate how tribal artisans are inspired to embrace product and process innovation with a hope to thrive in the VUCA times. TBM ‘educates’ the artisans for ‘jobs’ to build human capacity for ‘employability’ as well as for ‘coping’ livelihood strategies in a fast moving and complicated world.

**Intervention to Impact # 1: Creation of Innovation Hubs via ‘Cluster Development and Technology Induction’**

Partnerships bring individuals together such that the benefits of cooperation are demonstrated. Artisans with special skills producing higher volume of value added bamboo products are concentrated in small pockets, called Common Facility Centres (CFC), with a distinct sub-sector created within it. These are the ‘Hubs of Innovation’ that augment social inclusion. Clusters are a hub of training, procurement, marketing and production with a package of incentives in the form of hard and soft components.
Institution development, here is the key input for TBM success, the most important ‘leave-behind’ component functioning as a link between the market and the producers. Common Facility Centres are set-up to extend Technical and Design support. Design support for product innovation was especially for handicrafts and furniture making.

**Figure 1 Product Innovation at CFC**

Design transformations were kept in tandem with the domestic and global market with branding and market support. IL&FS Clusters partnered with online shopping giants like Amazon and Flipkart to provide bamboo crafts a global platform. Design training and workshops were given by Master Craftsman.

CFC provide market access beyond the cluster or the local market through reduced friction in trading and more specifically through reduced transportation and transaction costs. Here we address the first barrier of the VUCA world to development, Volatility. The impact of a volatile market on the sector is countered by Marx’s *Valorizability*, that is, the creation of *value*.

Marx (1867) argues that the production process is both a labour process creating *use-values* and a *value-creation* process through which additional new value is created (Crawley, 2016). The worker must create not only new value but surplus value. A *value creation process* which goes beyond the point at which the worker has just created the equivalent of the value of his own labour power, and begins to increase the value of capital, is a *valorization process*, not just a value creation process (Scott, 1996, p. 294). The enhancement of capital value, thus “becomes a purely social phenomenon” (Douai, 2009, p. 264).

**Intervention to Impact # 2: Community cohesion via “SHG creation under Cluster Development”**

CFCs were formed particularly in areas where high production and market potential exists. To facilitate coordination, *Self Help Groups* (SHG) are formed within the communities which realign the relationship between cluster activities and artisans. Inactive SHGs were regrouped and provided capacity building and management support. Creation of such self-regulating communities assists business processes and augments grassroots linkage of communities with the cluster facilities. The process of integration facilitated by TBM strengthens the social capital by developing positive relationships towards shared understanding and common values.

Building such community cohesion within and between communities is an essential step towards improving people’s quality of life. This aspect of the intervention addresses the ‘U’ in the VUCA. Uncertainty here is transformed through reforms to *Unifiability*. Artisans shed uncertainty of markets and methods and absorb new trends while preserving indigenous knowledge by the unification of their efforts.
Intervention to Impact # 3: Process Innovation

Supply chain of the Incense process takes place at different geographical locations from the North East to the South of the country. As a result the supply chain has a large number of traders and transporters at different stages. The bamboo industry is fragmented and hence competition is fierce. There is high dependence on distributors and retailers for marketing. This reduces the margin for actual workers i.e. the bamboo stick makers and the rolling community. The manufacturer has to operate in a highly cost sensitive situation and any quality lapse in the stick or rolling results in higher consumption of perfume which proves detrimental to the overall cost. The large supply chain as a result reduces the margins for the artisans.

The above Complexity is addressed in the Mission by the simplification of the supply chain and adding Cognizability to the process. Most things of worth and interest are beyond the cognizability of single individuals like scientific developments and how technology works, but this only poses a problem. Here again, collaborative communities become more cognizable and adapting as a team.

Intervention to Impact # 4: Working & Learning via “Community and Individual Capacity Building”

Sustainable bottom-up community development lies in building community capacity. Investing in human capital strengthens the skills, competencies and abilities of people and communities. IL&FS Clusters imparts skills training to artisans, which gives substance to empowerment. If empowerment is the value, then capacity building is the content. It makes the individuals the ‘actors’ to perform ‘effectively, efficiently and sustainably’. TBM builds on local strengths and promotes community participation and leadership, as well as ownership of both the problems and the solutions. Provision of adequate resources to support these processes greatly increases the likelihood of long-term benefits from such activities for rural communities.

Intervention to Impact # 5: Rise of Women Entrepreneurs

The 3Es are key to women empowerment. They have a positive multiplier effect for overall social and economic development when women, in the same extent as men, access economic and financial resources. TBM offers the tribal women a platform to invest in themselves and in turn benefit the whole society while augmenting gender equality. At the same time, providing women the opportunity to invest in their talents has a ripple effect on the community, whereby more women are encouraged to take the entrepreneurship route. The 3Es in the process make women more ‘employable’ compared to previous times, thereby empowering them.

“I am started my first business at the age of 16, with a capital investment of Rs.10,000 borrowed from my father. I made bamboo sticks for local Bamboo mat manufacturers. I became part of TBM in 2007-08. TBM gave me the opportunity to participate in national level workshops to explore new ideas and innovation for my business. I established my company which now has a turnover of 24 lakhs. Having my own set-up made me financially secure. It also gave other women the encouragement to work with me and set-up similar ventures in the community.”
**Intervention to Impact # 6: Financial Inclusion via “Credit Support Fund”**

Tripura has adequate banking network to support budding entrepreneurs and artisans. Interaction with banks, reveals that more than the availability of credit, the issue is of suitability of entrepreneurs for formal credit channel. Most entrepreneurs in the Bamboo sector do not have the capacity to avail bank credit as they have little to show in terms of the net worth and are not in a position to put the stipulated promoter’s contribution. There is also a lack of an entrepreneurial culture in the state and most economic activities are state driven. Most of the government schemes are for the organized sector, while almost all the entrepreneurs working in the bamboo sector are unorganized, essentially being small artisans working from homes preventing them from availing such facilities.

TBM started an intensive capacity building initiative in the self-help groups, especially those that were ripe for credit intervention. These SHGs were helped in formulation of a suitable business plan for public sector banks providing micro finance. Banks which are hesitant to lend to individuals are more likely to come forward and provide credit for CFCs on the strength of groups. TBM encouraged entrepreneurship through venture capital/private equity tailored to artisan needs.

**Intervention to Impact # 7: Environmental Sustainability and Food Security via “Resource and Plantation Development”**

Bamboo is not merely the poor man’s timber but is also the rich man’s delicacy. It is a source for food, fodder, furniture, building materials, paper, particle board, energy, and medicine. It also plays a vital role in environmental amelioration, biodiversity preservation, soil conservation and waste purification. Bamboo is well placed to address the food security through bamboo-based agro-forestry systems by maintaining the fertility of adjoining agricultural lands, and as a direct food source like edible bamboo shoots.

TBM has been promoting bamboo plantation on private land, land allocated under the Forest Rights Act and community land targeting small and marginal farmers since 2010-11. The main objective of promoting bamboo plantation is to provide income to the farmers, meet the demand of domestic and commercial use of bamboo and to ensure food security to the bamboo artisans of the state. Interventions under the Mission encourage common land or homestead plantation around clusters for select species like Muli. Quality planting material is also supplied to the artisans under the Mission. They are trained on environment friendly and scientific methods of farming hence adding to the natural capital of the region.

In the face of ‘unknown unknowns’ and the Ambiguity of opportunities therein, artisans through TBM reforms move a step towards Assurability, an assurability of resources, their preservation and a regular source of livelihood.

How natural capital created social value for the individual and the community is aptly depicted by the case of Samarjit Debbarma who is a farmer of West Tripura District, owning 0.8 of rain feed land. Earlier he was a daily agriculture labourer but was unable to feed his family in the paltry amount he earned. With the introduction of a more commercially viable species of bamboo like Kanak-Kaich under the Mission, he was able to get a good growth of the bamboo plants and sold the bamboo poles and Rhizomes at a good price.

“Bamboo cultivation is the only source of income of my family. Services provided under TBM helped me increase the commercial value of my products.”
Conclusion

TBM transformed the lives of tribal artisans and helped them move from a condition of perilous VUCA to a state where VUCA conditions have been overcome. TBM emphasized glocalization and was able to leverage the local knowledge and resources and packaged them to assimilate the local culture into a global one thereby creating a hybrid culture. It helped artisans move up the intervention ladder and create a world where the valorization of human capital and subsequent unification on a community level gave rise to a more cognizable commercial environment with assured returns.

A definitive and even larger impact of the Tripura Bamboo Mission is its adherence to the Sustainable Development Goals. TBM presents itself as a success story that can benefit the larger world through its potential to be replicated in similar societies or sectors. From a research perspective we will be conducting a quantitative study that further establishes the impact and explores the sustainable design in depth.

Tripura Bamboo Mission, as a sustainable livelihood model, innovatively transforms a subsistence crop into a Bambuseros delight. It lends both a cultural cachet to the tribal communities and an economic exquisiteness to products that come from them. Tribals are inspired to embrace product innovation with a hope to thrive in the VUCA times.
References
Marx, K. (1867). Capital, volume I.