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A Model for Designing Sustainable Community Based Enterprise TVET (CETVET) System in India

Abstract

India, traditionally, is constituted as a caste based society. Besides the sociological function of structuring the society, a caste was a label for a specific set of knowledge and skill generationally engaged into a specific occupation. The population belonging to a particular caste constitute a community, who used to practice the profession of the caste since generation and learning used to take place informally within the community. With the increased effort for the market driven skill supply, particularly in the post-independence India, the subscription to other formal professional programs increased, changing to professional learning from occupational learning. The result was an over populated skill set in a specific profession disturbing the demand-supply equilibrium of manpower in the market. Furthermore, the younger generation refused to subscribe to the community based occupational learning system and were attracted to the lure of formal market driven certificate programs and finally were found struggling for employment in the overpopulated market. Furthermore, the knowledge and skill sets of a community started fading with the formal educational paradigm.

The current paper proposes a model for developing a Community based Enterprise TVET (CETVET) system that would integrate the source of knowledge and skill from the community, certification from existing formal professional institutions, and a third party which is to manage the production-distribution chain to the market generating self-sustaining revenue. The proposed model has a holistic view of not only producing community specific skilled manpower but also employing them for production, and avoiding the overdependence on the saturated market for employment through linking to targeted consumers through an integrated production-distribution value chain. The conceptual model and its underlying hypotheses are based on information and data from secondary sources. The credibility of the model is evaluated theoretically based on value-created-shared framework and testing the potential of value created and shared amongst the related stakeholders.

1 Introduction

Two important strategic initiatives were undertaken by the prime minister of India in 2015. The first one was the integrated National Policy for Skill Development and Entrepreneurship and accompanied by National Skill Development Mission. Two of the policies acknowledge that the

country was gearing up its development policies to cater to the needs and aspiration of growing young population in terms of employment and self-satisfaction.

In the new order of skill development effort and ambition in India, it is necessary to target not only the development of skills related to the formal technical/engineering sector, but to also target all the skill sets related to other formal and informal sectors like, agriculture, horticulture, textiles, logistics and transport, hotel and tourism, etc. Furthermore, in order to capture a wider base of population for skill development along with entrepreneurial activities, the community structure of India and the respective communities need to be explored.

This paper aims at analysing the positioning of Vocational Education and Training (VET) in the context of Indian education system towards sustainable model of value creation in terms of mass scale skill development in India. We propose a Community based Enterprise TVET (CETVET) system to be positioned as a complementary to the existing TVET systems in India.

2 Literature Review

The unemployment status amongst the students from VET institutions has been always questioned in India as compared to conventional education institutions (Tilak 1988; UNESCO 2011). It is evident from the Indian Education (Technical and Vocational) system that the TVET is dimly positioned as a substitute to the higher education system of technical education. The horizontal mobility between the formal higher education and VET education is restricted and vertical mobility in the VET system is also equally limited. A policy is required to bring the equivalence between the two to allow mobility. Furthermore, a standard certification system having equivalence between the two is a bottleneck in the VET system (Mehrotra 2014) in order to foster coherence between the two types of systems. The umbrella ministries governing both the systems have critical role in bringing coherence and equivalence between the two. For example, the formal higher education system is the focus of Ministry of Human Resource Development and the VET is mostly managed by Ministry of Labour and Manpower, increasing the chance of non-coherence and mis-alignment between the two from their roots at the policy level. Hence, a policy level relook needs to be made with regard to VET system in particular and education system in general. Therefore the Ministry of Skill Development and Entrepreneurship (MSDE) was recently founded. It´s supposed help to restructure the responsibilities of VET in general (MSDE 2015). A joint certification system is also argued by the policy researchers. A study by Pilz and Li (2014) in India found out that the institutional arrangement related to VET and social acceptance of VET are some of the reasons for not having Germany-like joint certification in India.

Indian formal education system has not ignored imparting skill (VET like) in its structure as well as in its curriculum. There are evidences of both direct and indirect ways of vocationalisation found in formal education system.

2.1 Direct Model

In the Indian's modern education system, the VET has been introduced in both formal and non-formal way. There were Industrial Training Institutes (ITIs) and Diploma certifications opened as the parallel streams to the conventional graduation system. A student after completing 10th standard can choose to join two-year 12th standard or three-year Diploma course. Diploma course is more of practice-oriented course, which prepares the students getting ready for the job market. The course content is perceived to be difficult than the parallel 12th standard course. For example, if we compare two carrier paths in the field of Mechanical Engineering: one would be 10th, two-year 12th in Science Stream, four-year Graduation in Mechanical Engineering and the second option would be 10th, three-year Diploma in Mechanical Engineering. In both the cases, the students get the knowledge and skill of mechanical engineering, but the second stream is quicker, providing more skill to the students, preparing students joining as diplomas in the companies. Whereas, in the first case the students are more theoretically sound, take one extra year to graduate, have more options to navigate including higher studies and teaching and research opportunities.

Apart from the Diploma models, in India, there are both private and state promoted institutes that provide quick training for a specific kind of job through ITI certification like lathe machine operator, electrical fitter, cell phone servicing, etc. ITIs are perceived to be of lower qualification compared to the Diploma certification in terms of quality of both intake students and quality of job they get after certification. There are non-formal schools opened mostly by the state to impart skill training to specific group of workers as the knowledge and skill extension exercise (Pandya and Maniar 2014). For example, there are non-formal schools that provide training to the handloom weavers, stitching and designing particularly to the self-employed youths. These courses do not have any prerequisite in terms of any formal qualification. Sometimes, Government of India also opens up various short-term skill-training exercises as a part of development schemes. For example, training programs are made on dairy farming to the farmers in the rural India. NGOs take more proactive role in imparting such specific training courses.

2.2 Indirect Model

The indirect model describes how the concept of VET is superimposed with the conventional degree education system in order to bring in more skill development component to the program. This is done through various modification of process elements in the education delivery system. Although it cannot be a substitute to the VET system as it lacks the occupational aspects of VET philosophy; however, it brings in extra skill development of the students. It also further depends

on the 'rigor' of the design and implementation of modified process points. The interventions in the education delivery process can be done in various ways like choosing an optimal mix of faculties from academia and industries, including an industry internship program in the curriculum, following a facilitator-participants and activity based pedagogy, providing training to the faculties in the Industry, offering dual-degree programs, students being part of industry sponsored problem solving competition, etc. The alternate arrangements usually made by the university authorities in order to enhance skill presented in **Fehler! Verweisquelle konnte nicht gefunden werden.** below.

Figure 1: Alternative Way of Generating Skill in the University Model

2.3 Quality Perception

Furthermore, as per the public perception in India regarding VET education, i.e. skilling through vocational education, has become the last option after formal education system (Government of India 2015). Because of which, the TVET route of education is given second order preference by the meritorious students and demand for higher education degrees is exaggerating. In the other hand, industry continues to provide higher weightage to the later. In a study in the Production Engineering discipline, industry provides higher weightage to an engineering graduate than a polytechnic scholar with an understanding that the former has both technical and managerial skill compared the later having only technical skill (Khare et al. 2015). The students, as a result, coming out of VET systems like ITIs and Diplomas in India always fall in the second line in the

formal job market. ITI education particularly has reached a dead-end without having an employment in a formal job market, which is many times alleged to be due to lack of proper quality standard of VET professionals (Tara et al. 2016). The regulation of ITIs and their academic standards, particularly those who mushroomed after the establishment of National Skill Development Corporation (NSDC) in 2010, is a matter of question (Mehrotra 2014).

2.4 VET and School Education System

The VET system was established as a by-pass after the post-high school study. It was grounded on an assumption that there was an existence of a labour market who could absorb the qualified VET professionals. The labour market, in post-independent India, started to develop with establishment of various state-owned manufacturing companies, increase of economic activities in terms entrepreneurship, trades, and business. The establishment of such activities created a demand for skilled and unskilled labour. In parallel with the establishment of production houses, the education system also started to reform. It started with elementary school education. The elementary school education was up to the age of 10-12 years, where the system was mostly similar and standardized for all. In the higher secondary level the segmentation of subjects started. The students passing out from senior secondary schools used to be segregated into various disciplines (like Social Science, Science and Mathematics, and Sanskrit etc.) for the next level of higher secondary education. In the higher secondary level, they used to pursue more on their chosen disciplines.

The students after higher secondary school are divided into majorly three different streams, i.e. Science, Arts, and Commerce. Although the division is supposed to be based on the interest of the students, but it is largely guided by the performance in the senior secondary schools. The top performers are largely skewed towards science stream followed by commerce and arts streams. The reason for such bias towards the choice of stream is largely driven by the carrier scope and employment opportunities. Furthermore, the education policy allows lateral entry from science to commerce and commerce to arts stream in the subsequent level of education where as vice versa is not true.

3 Indian Traditional Learning System: A Forgotten Story

The concept of VET in Indian context was not new. In the ancient India, the VET model was being operated in the family or in the community itself through a caste system. The caste system was established as a form of Indigenous Knowledge System in the Indian society and was a way of living since ages (Gupta 2012). The society then was comprised of various castes and sub-castes. Each of the castes represented a specific skill used for the occupation of family members. The family of a particular caste was engaged in the economic activity using the caste related skill. Thus, the family used to earn money using their caste based skill. The competency (knowledge

and skill) required for the activity was passed on generation to generation through mentoring by the elders to the young in a family. It was also a taboo for someone to try to practice other's economic activity. There are instances in the history having examples of severe punishments up to death for going against the taboo.

However, with appearance of formal schooling system with standardized curriculum, standard examination patterns, and mass certification system, the true essence of the VET systems have faded away. The increasing focus on the performance at the end-of-course examination motivated the students towards theoretical understanding and memorization of the subject contents rather than their applications. Though there were arrangements made by the state to enhance the application skill of the students, but the effect of such arrangements in the education systems was minimal both in quantity and quality parameters. Thus, there has been a severe imbalance in the production of knowledge and skills in the country in terms of unemployment and employability questions, efficiency and effectiveness mismatches, etc. We, in this paper, recommend policy interventions in the education and skill development sector keeping in the current trends in the macro-economic factors by proposing a CETVET model of education system where both degree based and skill based education can be imparted. We also debate how education and skill development could be attached with business development in order to foster self-employment generation and minimize dependence on the job market.

4 Challenges and Objectives

Production of skilled manpower through ITIs and Polytechnique institutes are the old method of VET education industry. This is because, there is less demand for the skill that are still imparted through the ITI and Polytechnique institutes due to disruptive change in technology and upgradation of older technology. Secondly, the volume of demand for the existing skill sets are declining due to stagnation of job market. Demand for new skill sets have arrived. Unlike the past, the new skill sets are now having short life cycle. That means the demand for particular skill remains for short time. Conversely, the demand for generic skill sets are saturated. Hence, there is a need to devise a skill development system, which would cater to the immediate need for the vicinity industries. The service and IT industry are the best examples for demanding a specialized skill set for a short period time. A particular skill set is alive and in demand until the new technology is in place. Hence, technology and demand for skill are highly correlated. Furthermore, the dynamic nature of technology driven market is causing uncertainty in the skill demand. It also forces the employees to change their location in search for employment resulting in dynamic demography (OECD 2017). The overdependence on the market driven skill system needs to be set to turn around. That means a particular skill set instead of depending on the market should create its market vicinity to the employees. This kind of system can be described as a demand-based integrated model that is primarily community based and enterprising VET (CETVET) system.

The objectives of designing sustainable organization for CETVET system has manifold reasons:

- It has to be community based.
- The transfer process has to be grounded on inherited knowledge and skill.
- It should have sufficient flexibility to adapt to external and internal changes.
- It should create sufficient value for related stakeholders.
- The employees should continuously learn.
- The employees should have sufficient motivation to learn.
- The quality of life of the employees should continuously improve.
- It should have scope for family level engagements.
- The employees need not migrate to cities (out of communities) for earning livelihood.
- The organization should have sufficient scope for apprentices to join higher education.
- The knowledge and skill should have sufficient scope to continuously adapt to contemporary modern education.
- The organization should have a long-term viability.

5 CETVET Model

The conceptualized CETVET model broadly consists of three stakeholders, i.e. State, Community, and Consumers. Based on the need and demand, the model is divided into five sectors, Government, Community, Production and Distribution, Higher Education, and Market. The physical and information flow amongst the sectors define the complete overview of the model (Figure 2).

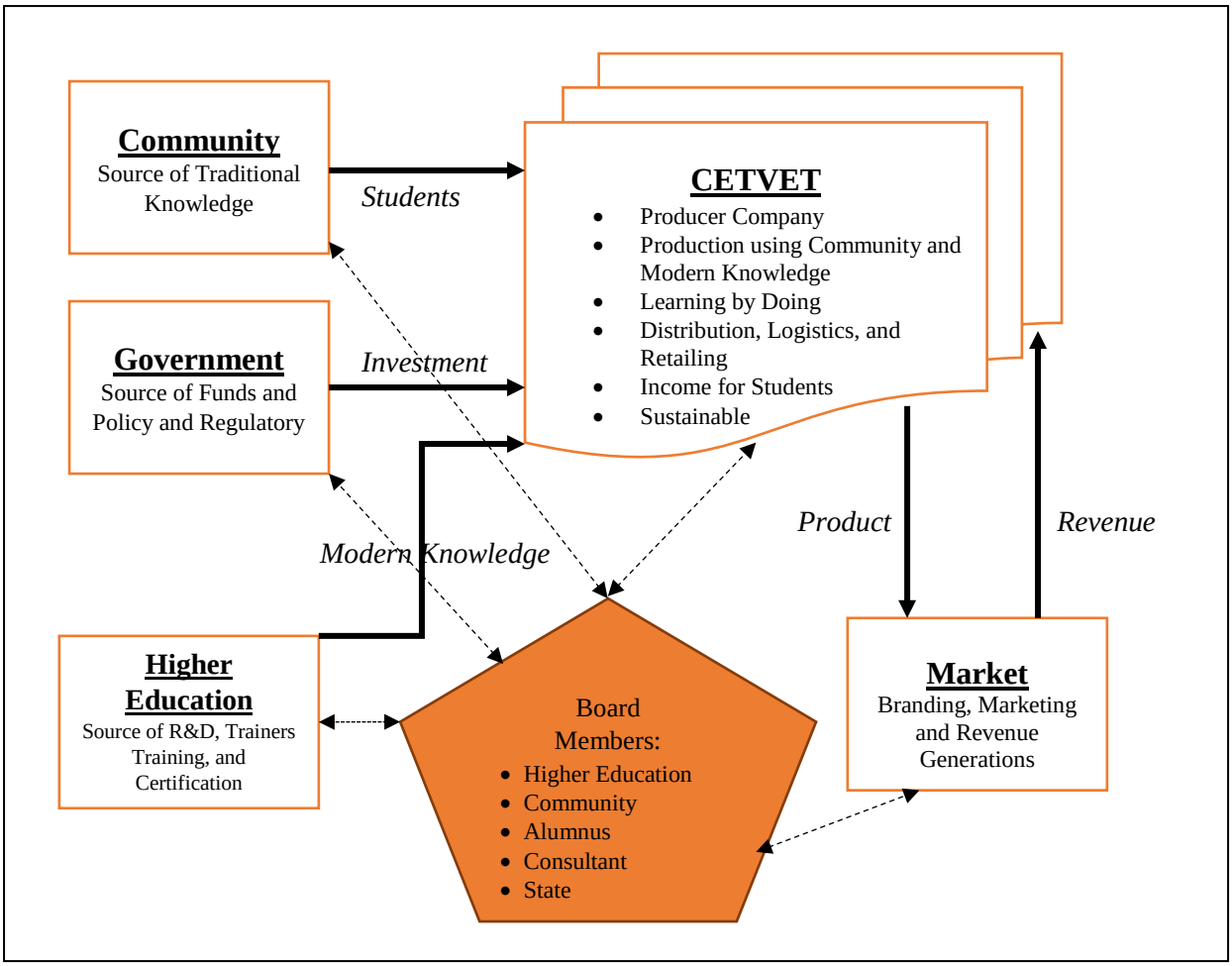

Figure 2: Model Overview Diagram of CETVET System

The proposed model is grounded on the concept of community-managed organizations in a cooperative form. Amul (Amul 2017) in India has been a successful model run by cooperatives. In the similar line of thought, we propose a model for TVET in India, which will be sustainable, self-sufficient, traditional knowledge based, and more importantly evolving with contemporary innovations. In order to achieve the specific objectives cited earlier, the proposed model is consisted of various stakeholders and institutions as explained below.

5.1 Community

A particular community is defined as a group of people living in vicinity to each other and having similar kind of culture, and inherited occupation from their ancestors. For example, it could be a group of farmers raising similar kind of crops nearby their dwellings. In a modern context, a community may be a group of people in a city or locality and practicing same/similar activities for their livelihood. For example, they could be a group of taxi-drivers. In India, Mumbai Dabbawalas (MumbaiDabbawala 2017) is an example of community.

Community, in the traditional Indian context, is mostly configured around 'castes' – a sociological unit which describes hierarchy, interdependence including a unique skill base and craftsmanship. Traditional art forms, handicraft and the subtly embedded vocations would represent some of those communities (Deshpande and Kerbo 2010). For example, the communities in villages like, Milkmen, Horticulture Farmers, Silk Weavers, and Fishermen and Aqua culturists, are basically evolved from one generation to another generation; skill and occupations are inherited from their ancestors (Nesfield 1885).

However, in an urban context, the role of ancestral generation is absent. The community evolves through horizontal referencing mechanism, e.g. Mumbai Dabbawalas (MumbaiDabbawala 2017). In both the cases, the communities are to grow from generation to generation. For such community to evolve in terms of activities there should be sufficient attraction in terms of income, honour, and social and financial security. One of the major strength of community is the network economy. That means the value of the community increases as they grow in mass due to a network effect (Munshi 2016).

Conversely, there are strong debates on ill effects of a caste based society, several interventions both at a policy and social levels have been tried to build the nation, which could be a caste/class-less society. Although with decades of such efforts to do away with such social categorizations, the nation continues to reinforce certain stereotypes. By way of affirmative action at all levels of education and employment, benefits are allowed to those who are born with the given caste. Movements keep happening to increase the basket of such privileges to those who still do not get considered as the underprivileged. While the continuum of debate ranges from the severity of the need to provide for such affirmative action; how long will the nation continue to reinforce the system and not allow the collective memory to fade away on any of such discrimination?

The status quo as maintained is that all government educational and work organizations continue to provision for certain number of vacancies only to be awarded to people belonging to certain castes. While at a more systemic level there are constitutional procedures to be adhered to, at a more cultural and sociological level there are certain shifts, which are both intended and unintended. Not much has been attempted to preserve and strengthen those communities who may be willing and further their traditional vocation base.

While there is a strong debate to demolish the hierarchical basis of such community structuring, there is also an equally unrealized need to preserve and further the culturally consonant skill base.

In the proposed model, community acts as a source of supply of manpower and traditional inherited knowledge and skills. The young and motivated people can join as trainees and then continue as employees in the CETVET centres. The community can set a criteria and selection process for supply of young trainees to the CETVET.

5.2 Government

Government (State/Central) needs to have a pro-active role in setting up CETVET centres in terms of identifying the community, funding as public investments, deciding policy guidelines, providing regulatory and legal support and keeping track of auditing and accountability. Government, furthermore, can set-up an autonomous board comprising of various stakeholders with a chairman as the coordinator. As the proposed model is new, the Government can start with a testing and demonstration model by choosing an experimental site. The model can be scaled up as a scheme across the nation after successful experimentation.

5.3 Higher Education Institutions (HEI)

The Higher Education Institutions (HEI) has an important role in setting up a CETVET model in India. Tough the HEIs have an indirect way of imparting vocational skill as a part of their conventional degree-granting curriculum, they are highly disconnected from the vocationalisation of technical knowledge. Alternatively, the direct vocational institutions like it is and Diploma schools are last preferred institutions amongst the students aspiring for technical education due to lack of employment opportunities. In our proposed model, HEIs can act as a source of Research & Development (R&D) to the vocational education of CETVETs and a specific centre can be established there (similar to incubation centres). The centre will have the role of training the instructors of a CETVET, teaching the theoretical and contemporary technical stuffs to the trainees and employees, providing certificates to the trainees and employees through a customized program. HEIs can add value to the trainers in terms of enhancement of their traditional knowledge and skills, can add value to the trainees and employees in terms of knowledge and skill and motivation and providing carrier progression opportunities through program certification.

5.4 Market

Market sector is the most important sector, which is not in our control and has a decisive power for the success of the model. We mean by market is, not the labour market; it is the market for sale of product produced by the CETVET. One of classic examples of such kind of successful market is FabIndia (FabIndia 2017). FabIndia created a premium market itself for the sale of handcrafted products manufactured by the rural households situated far away from the market. Similar market is conceptualized for CETVET model. Such kind of market may or may not be part of the CETVET. If it is excluded, then we have to have a marketing partner into our basket as a stakeholder. If included, we have to have another HEI related to Management discipline in addition to the technical HEI. Whichever is the case, the CETVET stakeholders are required to create and manage the supply chain till the customer level through successful marketing programs. The objective is to generate sufficient revenue, which can support the expenditure of the CETVET.

5.5 Production

Production sector is the core of the CETVET system. The learning happens as a part of real-time production environment in the production sector. The trainees will be the freshers/juniors working under senior employees. The senior employees are the students who have earlier passed through their training period in the production sector. The seniors may/may not have the certificate from the HEIs depending on their capability to qualify and pass through the certification program at HEIs. However, they would be still working as employee as long as they want to. With the increase in their experience in the CETVET production sector, the seniors will go up the ladder as supervisor, manager, senior manager, trainers, etc. similar to the industry equivalent positions. There would be trainers present in the production sector for teaching the trainees. These trainers would be continuously getting trained by working with research projects and other assignments through the CETVET centres present in HEIs. There could be faculties from HEIs who might be interested to work as a trainer in the CETVET production sector in a short-term and long-term tenure. The most important function of the production sector is the admission process, which need to be rigorous and transparent in order to maintain the quality and viability of the model. The admission of new trainees should be based on a qualifying criteria set by the trainers and HEI partner following a recommendation from the community representative based on trainee's inherited capability, personality, and other necessary qualifications. The production unit attached to the CETVET needs to be registered as a producer company in order to operate at par with the private industry players.

5.6 Board

Board is an overarching autonomous body consisting of members from various stakeholders, like, Member HEIs, Member CETVET Production sector, Member Senior Alumni, Member Local Community, Member Government Official, and finally a Chief-Executive-Officer (CEO). Any other member, except the CEO, is to be appointed as the Chairman of the Board by the Government. The role of the Board is to select and appoint the CEO inside/outside the system, to prepare the strategy for the CETVET system, and to authorize the CEO with the responsibility of implementing the strategy in order to meet the desired objectives and goal. The CEO need to be a full time executive for a fixed tenure.

6 Model Evaluation

The proposed model is based on conceptual understanding of the authors on the contextual dynamics of the Indian community system, success/failure of the conventional VET system (ITIs/Diplomas), supported with opinions of various stakeholders of the community, HEIs, and state officials through discussions at various levels with the authors. Though the detail modalities need to be worked out, we tried to evaluate the efficacy and viability of the model theoretically

using ‘Value-Created-Shared’ framework. The ‘Value-Created-Shared’ framework is conceptualized by the authors similar to the platform based organizations, who thrive and sustain based on the creating a mechanism where multiple sides of the platform create value for each other. Similarly, we have evaluated the proposed CETVET model theoretically using the same framework, to test whether the various stakeholders are creating value for each other not.

The evaluation of values created for each other by the important stakeholders are shown in Table 1. Each of the cells in the Table 1 indicates the value created by its corresponding row player sharing with corresponding column player. The stakeholders of the same group create value for themselves through a ‘Network Value’. The Network Value for each other increases due to the size and interactions amongst the stakeholders with the growth and scaling up. The community creates value for students by sourcing the capable and motivated youth to join CETVET. The community creates value for the employees (students passing out of training period and starts working in the same system) by providing them respect in the community. HEIs get benefitted from community in terms of acquiring traditional knowledge and skill and enhancing the theoretical knowledge base through R&D. The customers get value from the community in getting exotic attributes in the product.

The students (trainees) add pride to the community being the part of CETVET system and helping in evolution of community knowledge and skill. The students, being as fresher and being from a younger generation, continuously challenge the past knowledge and skills, i.e. old school of thought, of the employees (seniors) thus updating their learning. The students can act as a support resource to the R&D of HEIs in terms of data collection, surveys, and data entry jobs. The students act as a future value engines in terms of upgraded resources for better product design and delivery.

The employees are almost similar to the students in terms of value creation and sharing. Employees through their experience challenge the community to improve their past knowledge and skill in addition to bringing community pride. The employees establish a new order of inter-generational knowledge and skill in the community. They always act as mentors to the students as the junior trainees. The senior and capable employee can be part of R&D activities carried out at HEIs and thus enhancing the quality of the research at HEIs. The employees are the direct manpower value present in the product provided to the customers.

The HEIs directly add value to the community in sharpening their knowledge and skill by adding theoretical inputs to them. The HEIs provide opportunity to the students for higher studies and awarding certificates through a specific program offered through the CETVET centre. The certificate from HEIs directly increases the self-esteem of the students and allows them to pursue higher study instead of working at CETVET as employees. The HEIs offer R&D partnership to the senior employees of CETVET system. The HEIs add direct value to the customers through setting standards and quality certification to the products.

Table 1: **Value-Created-Shared Framework for CETVET Model Evaluation**

		Value Shared By				
	Stakeholders	**Community**	**Students**	**Employees**	**HEIs**	**Customers**
Value Created By	**Community**	**Network Value**	Pre-emptive Training for CETVET	Motivation and Respect	Source of Traditional Know-Hows	Traditional Knowledge and Skill converted to premium product value
	Students	Community Pride	**Network Value**	Challenge Old Knowledge and Skill	Support to R&D at HEIs	Future Manpower responsible for Product Value delivery
	Employees	Income and Quality of Life and Community Pride	Mentoring and Coaching	**Network Value**	R&D Partners from the Field	Manpower component of Product Value to customer
	HEIs	Knowledge and Skill Enhancement	Opportunity for Higher Studies and Certification	R&D Partnership	**Network Value**	Quality and Standard Certification
	Customers	Pay Premium for the Products	Respect to the students	Revenue	Feedback for R&D	**Network Value**

The customers add indirect value to the community by paying a premium to the product that is manufactured based on the traditional knowledge and skill of the community. Customers pay respect to the students who are the budding manpower behind the quality of the product they consume. The customers add direct value to the employees by buying the product and generating revenue for the CETVET system. Customer feedback adds direct value to the HEIs as input to their R&D.

The values created and shared, as discussed, are the binding fluid of the whole CETVET system. The CEO needs to ensure that the values are created continuously and shared amongst them for growth and sustainability of the CETVET system.

7 Discussions

The paper was conceptualized with a starting assumption of overdependence of formal vocational education in India on the saturating job market. The challenges are manifold, however, the fundamental problem behind the failure is lack of sufficient job opportunity in the formal labour market. Hence, the proposed CETVET model is not only a production and learning environment but also has been extended up to the market. Bringing market to the basket of the model ensures revenue generation and hence providing a source for viable employment creation for the trainees.

We also had diversified structure of the Indian society with varieties of inheritable knowledge and skill in mind, which are fading away with the current structure of the mass-production and skewed industry driven education system. In order to retain the traditional knowledge and production skills, we have engaged community as the starting point of the CETVET model in facilitating and supplying capable trainees from themselves. The product to be manufactured is to be selected based on the core strength of the community knowledge. For example, a community which is generationally engaged in horticulture, has the knowledge and skill of horticulture, can be identified to be part of a CETVET system established in their community. The CETVET could have a system of fruit production and fruit supply chain along with retailing to the end-customers. And/or, the CETVET could vertically add value to the supply chain by integrating fruit-juice production system and delivering fruit-juice to the end customer. The complete production-distribution value chain will have scope for training in production and business in horticulture farming, fruit processing, transport and distribution, and retailing. The trainees can be engaged as employees of the CETVET system and earn money along with continuous knowledge and skill acquisition in horticulture, food processing, and business management as well. The market scope can expand with the success of the CETVET and the CETVET capacity will increase in terms of trainees and employees.

We also considered the failure in upgradation of traditional knowledge and skill of the community at par with the modern and contemporary knowledge and skills. For example, to be specific, the horticulture farming practiced by the community may need to enhance their efficiency through modern horticulture science knowledge. In order to take care of the scope for improvement of traditional knowledge and skill, we propose the CETVET to be partnered with the HEIs by having an extension centre there. The continuous training of trainers of CETVET and classroom teaching of trainees the ‘inferior quality’ perception of vocational education will be erased. Furthermore, through a certificate system (qualifying and passing through the evaluation criteria) the trainees can have option to continue higher studies. For example, a

horticulture CETVET system can have a partnership with Indian Council of Agriculture Research (ICAR) institute that can provide BSc and MSc degrees in agriculture/horticulture. The ICAR partner institute can have a dedicated centre to manage training of the CETVET trainers and continuously enhance their theoretical knowledge. The eligible trainees or employees (post training at CETVET) can join BSc/MSc program syllabus in order to get a degree certification from the partner institute. Although it is a conceptual argument, but a detailed action plan for such alignment may be worked out. A management institute can also be a partner with the CETVET system in bringing out training and certification related to business management. The partner institute not only enhances the theoretical knowledge and skill of the CETVET but also increases the 'self-esteem' of the trainees.

By registering the CETVET as a producer company, the employees would get a feel of entrepreneurship and their experience will be at par with the industry standards. Hence, the employees also continuously add both technical and managerial value to their skill basket. An overarching board can act as integration of all the activities from community to market and coordinating both vertical and horizontal stakeholders of CETVET. The proposed CEO as a member of the board will have to act as a member in creating value for all the stakeholders and helping the overall system to grow further. Nevertheless, there could be network of similar CETVET systems in the region to multiply overall value.

By the virtue of its design and efficient processes imbibed, the CETVET is adjustable and adaptable to the external changes in the political, economic, social, and technological factors. For example, the change in customer preferences are received into the CETVET system and its R&D activity with the HEIs would bring in new knowledge into CETVET in terms of both teaching and production. Similarly, change in technology would be infused into the system by the HEIs and CETVET would learn and modify its learning and production activities.

8 Conclusions

The success of the CETVET model depends on its efficiency in delivering value for each other. The value may be social, psychological, educational, and financial. The discussion on financial value, i.e. viability is not discussed here as it is highly related to the scale of the model. However, a financial value can be assured if rest of the values are able to be created. For a community the most important aspects of value are quality of life, preservation of their traditional resources (both intellectual and physical resources), and dignity. As the CETVET is starting with the knowledge of the community and the core of the human resource, i.e. the trainee and the senior employees are from the community, the community could be able to derive sufficient value from the CETVET system.

The 'people', i.e., the trainees and the senior employees of CETVET see their value in generating knowledge and skill, getting employment and generating income from themselves, happiness in

the form of not migrating to urban areas and enjoying the profession as the activities are based on their ancestral knowledge system. Furthermore, they also see value in having scope for higher education and as respected as to the professional of higher education institutes and 'modern' industries. The proposed CETVET is structurally so designed as to generate the values for the 'people' of the community engaged in the CETVET. However, the probable value expected to be generated depends on: financial viability of the CETVET system, and commitment and engagement of the HEIs in extending its academic activities to the CETVET system as a partner.

The most important, the financial value generated by CETVET depends on the marketing and sales of the outputs in the market. There is a requirement of management efficiency in generating this value. The management efficiency can be generated through partnering with a management institute (HEI) and/or appointing the CEO from the management background. The core of the CETVET activities need to be extended till the market for two reasons. First, attachment of market is important for CETVET in order to reduce dependence on the job market; and second, a managerial skill can be imparted to the interested trainees of the community along with technical vocational skill.

The implementation of CETVET model is not free from challenges. First, the success of the model is largely dependent on the effectiveness of amalgamation of various institutions on board. Hence, creating a co-partnership structure aligning towards a converged goal is the biggest challenge in the current system of organizational culture. Hierarchy and rigid bureaucracy are the few of the resistive elements in creating such a unified multi-institutional organization. Second, such type of system requires time and continuous improvement to succeed as a robust model. Hence, short-termism and quick-fixing attitudes are the elements of challenges before development of CETVET system.

The proposed CETVET system is purely at its conceptual state. However, with the Value-Created-Shared based evaluation of the model, we could infer that if the perceived value can be created the CETVET is definitely going to be sustainable and self-dependent system establishing a new way of vocational education system in India. It should not be considered as a substitute to the existing formal VET-systems like ITIs and Diploma schoolings. The CETVET should be considered as a blue ocean in the vocational education industry in India complementing the existing systems. Such type of complementary system has been successfully established in India by Narayana Health (https://www.narayanahealth.org/). The proposed CETVET system is novel in the way of having capability to create a job demand by itself, not to allow fading away of valuable traditional community knowledge and skill, to create superior value through joint venturing with HEIs, to be growing organically with self-sustainable structure. The proposed model is a first-hand guideline towards experimenting a CETVET system to validate its efficacy and viability. In a macro-level, CETVET is aiming at preventing migration of skilled manpower from their community, which is a major headache for the nation in terms of rural-urban brain-drain phenomenon.

Few points need to be understood in crafting a CETVET model in the Indian Education System. Affiliations, in terms of sponsorship and investment, to the particular department in the Government need to be defined. Identification of particular community and its knowledge system is also an important task. It is not true that all the community and their knowledge system can be adapted to a CETVET model. A study on market feasibility in terms of size and scope of the market and technical feasibility in terms of HEIs alignment need to be checked before selecting it for a CETVET model.

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