

Designing Policy Framework for Smart Entrepreneurship and Self-reliant Smart Village Economy: An Entrepreneurial Funnel Framework

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Abstract

Smart village is a relatively new and innovative concept in rural development policy. This paper aims at emphasizing the need for smart villages; and sets out the policy framework for smart village development and smart entrepreneurship towards making self-reliant smart village economy. The designed policy framework integrates two inter linked and inter dependent parts: (I) framework for smart village development, and (II) funnel framework for smart entrepreneurship. The first framework for smart village development consists of two major steps which includes selection process of a village and formation of expert consortiums of specialized development institutions. Some important consortiums which essentially required for smart village development are consortiums for the development of infrastructure, health, education, agriculture, hygiene & sanitation, e-governance and entrepreneurship development. The second framework is called as funnel framework for smart entrepreneurship development in the selected village with six entrepreneurial steps consisting of awareness-cum-promotion, competency assessment / mapping, capacity building (basic & advanced stage), business support in enterprises setup and lastly performance measurement including mentoring towards attaining business sustainability. The entrepreneurial funnel framework clearly illustrates that the approximate turnout rate of rural participants' decreases over the every next stage of entrepreneurial interventions / activities and it finally reaches to about 5-8 per cent level (potential entrepreneurs) who successfully completes all specified stages as per the framework to start their enterprise. The policy framework was designed on evidence based observations and experiences of various village adoption s (VAP) including the successful interventions under the smarTgram project in the state of Haryana (India). The study has policy implication for making smart villages in the country. The entrepreneurial funnel approach provides policy guidelines for smart entrepreneurship development for making self-reliant smart-village economy.

Key words: Smart village, smart entrepreneurship, entrepreneurial funnel framework

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1. Introduction

India is predominantly a rural country with over two-third of its population residing in about 6.49 lakh villages, and mostly in poor living conditions with low quality of life. The government has made several efforts for transforming rural areas to improve the living standard of rural masses but couldn't achieve the desired results. The previous approaches to rural development have not effectively addressed the various issues of rural areas and left the rural people to confront with various challenges. Rural areas felt strong need for innovative approaches that could provide smart solutions to multiple rural problems. The 'smart village' is relatively new and high-tech approach to transform an under developed village into economically, socially, environmentally and physically sustainable village (Atkočiūnienė & Vazonienė, 2019; Patel & Shah 2017; Somwanshi et al., 2016; Naldi et al. 2015). The driving motivation behind the concept of 'smart village' is that the utilization of (digital) technology acts as a catalyst for holistic and sustainable development of village (Gangani et al., 2018). Smart villages are providing many benefits of 21st century life similar to urban living while retaining aspects of rural life (Limaye et al., 2016). The study highlights the need for smart villages in 21st century; and develops integrated policy framework for smart village development and smart entrepreneurship towards making self-reliant smart village economy.

2. Need for smart villages

Development of rural areas holds the key to improve the quality of life and economic well-being of rural masses. Unfortunately, rural areas in the country are still in under developed state and treated as place of poor people (Garjola & Singh, 2017). Millions of rural population are experiencing difficulty in access to primary healthcare, quality of education, citizen utility services, banking services, internet connectivity apart from infrastructural issues, putting them at a disadvantaged and poor condition than their urban counterparts (Agarwal et al. 2018; Yakanna, 2017; Mathur, 2011; Dercon, 2009). In addition to the above issues, the challenges of rural poverty, food security, unemployment and lack of non-farm economic opportunities remained high in the country (Bhushan, 2018; Forrest, 2017; Kushalakshi & Raghurama, 2014). The above issues and challenges facing rural communities are multifaceted, inter woven and complex which need to overcome through the adoption of innovative approaches.

'Smart Villages' is relatively new and high-tech approach in rural development policy to respond the challenges of 21st century, derived from Mahatma Gandhi's vision of Adarsh Gram (ideal village). Smart village is smart entrance to essential rural services such as high-tech education (access to internet, e-contents, use of educational apps, smart classes, video conference), e-health services (e-clinics for online consultation with specialist doctors), e-governance (common service centre for speedy delivery of essential public utility services including social welfare schemes) and high-tech village security with CCTV camera for surveillance (Lytras et al, 2019; Vinayagamoorthi & Sudha, 2017; Viswanadham & Vedula, 2010). Along with above smart services and intelligent ICT infrastructures, the provision of eco-friendly amenities and hard infrastructure such as all-weather roads (for physical connectivity with local markets and important institutions), transportation facilities (buses, auto & taxis), health centre (equipped with basic healthcare facilities & medical shop), well

maintained school buildings (primary to intermediate level or beyond), advanced anganwadi centre, bank, overhead water tank for regular drinking water supply /water ATM, warehouses and cold storages are the great enablers to a smart village (Aziiza & Susanto, 2020; Beg, 2018). The availability of both soft and hard infrastructures in smart village opens the door to create economic opportunities through entrepreneurial interventions in the village for making self-reliant smart village economy.

3. Smart entrepreneurship for self-reliant smart village economy

At the core of making smart village is to viability of Mahatma Gandhi's vision of economically self-sufficient and self-reliant villages where the villages will be the growth centre of the rural economy. Entrepreneurship has been recognized as an important driver of economic growth, productivity and employment generation (Chigora & Tandi, 2018; Doran et al., 2018; González-Cruz & Devece, 2018; Ács, 2006). Rural areas are rich in many natural resources including availability of agriculture raw materials and manpower that's why poses a huge entrepreneurial potential, which remains unexplored. Entrepreneurial interventions in villages can act as a catalyst for boosting rural economy, employment generation and minimizing income gap between rural & urban areas (Aziiza & Susanto, 2020; Bansal & Kaur, 2019; Bhavita & Malek, 2018; Aggarwal, 2013). Realizing entrepreneurship development holds promise for enhancing rural livelihood and economic opportunities, government has designed and launched several schemes such as Swarnajayanti Gram Swarozgar Yojana (SGSY) and Rural Employment Generation (REGP) etc. but the desired result couldn't be achieved due to problems in policy design and /or implementation (Abhyankar, 2014; Ali and Nath, 2012). This has necessitated for a fresh and innovative approach for effective and sustainable rural entrepreneurship development in the country.

Smart entrepreneurship is a strategic innovation which adopts consortium approach for the village level interventions for effective results. The formation of entrepreneurial consortium brings together expert institutions having expertise on different aspects of rural entrepreneurship development. The consortium conducts a series of entrepreneurial programs for creating an enabling entrepreneurial eco-system in the village. It starts with community mobilization-cum-awareness through entrepreneurial orientation programs and thereafter focused interventions are made for the identification of potential entrepreneurs based on individuals' interest, experiences and competency mapping. Other major entrepreneurial interventions are training and capacity building (basic & advanced stage) of potential entrepreneurs including business support in their enterprise setup in terms of incubation and institutional linkages (bank & markets). Performance measurement of the business and mentoring to potential entrepreneurs are also very crucial support required towards attaining business sustainability. Thus, the smart entrepreneurship development is a systematic and logical approach which guides the consortium members for step-by-step interventions for creating sustainable rural business enterprises with ultimate aim at making self-reliant smart village economy.

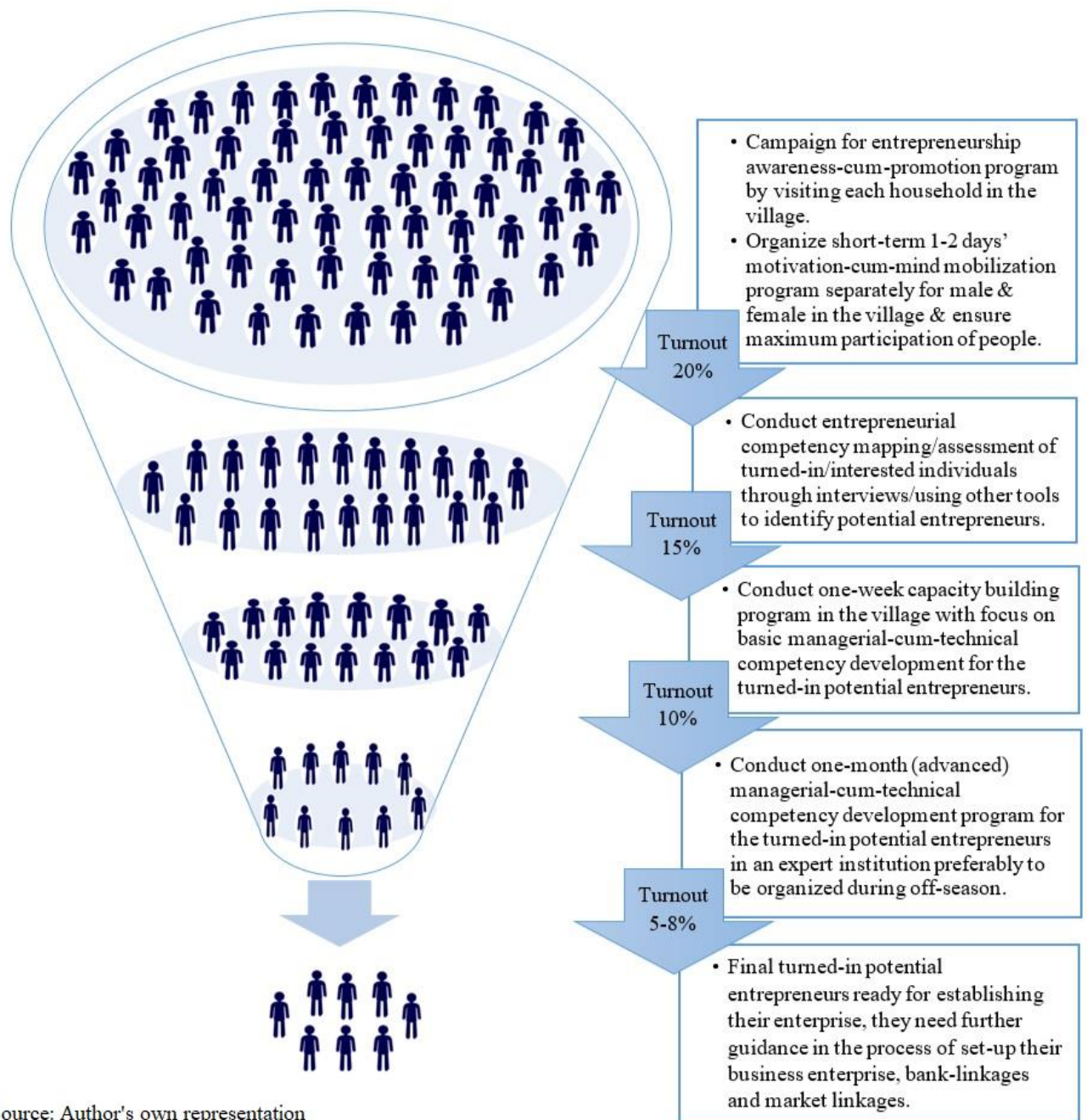
4. Entrepreneurial funnel framework for smart entrepreneurship development

The growing interest in smart villages for making self-reliant smart-village economy has raised questions before researchers and policy makers about how to create the most effective entrepreneurial policy framework for sustainable entrepreneurship development in smart villages. Although, there were various policy frameworks developed by policy makers and researchers but mostly based on theoretical basis which often lacks practical implication and sustainability issues. The developed entrepreneurial funnel framework under this study is based on the ground level experiences and observations of the author from the NIFTEM's village adoption programs in some states including the most important entrepreneurial interventions under the Rashtrapati Bhavan SmartTgram pilot project in the state of Haryana.

The entrepreneurial funnel framework, as a process innovation, guides the step-wise procedures adopted to identify the potential entrepreneurs in a smart-village who can be agent of change to transform the rural economy for making it self-reliant. As represented in figure-1, the funnel framework guides to the identification of potential entrepreneurs through the following sequence of focused interventions / activities which are linked and interdependent: awareness-cum-promotion program, competency mapping / assessment, training & capacity building (basic & advanced), business support in enterprise setup (such as incubation, bank-linkages, market linkages and seed-finance) and performance measurement including mentoring towards business sustainability.

The entrepreneurial funnel framework also indicates that the approximate turnout rate of rural participants' decreases over the every next stage of interventions / activities and it finally reaches to about 5-8 per cent level (potential entrepreneurs) who successfully completes all the specified stages and ready to launch their business enterprise. The given estimates of turnout rate at different stages of the funnel framework were based on the ground level experiences and observations of the author from various village adoption programs and smartTgram project in the state of Haryana.

Figure 1: Entrepreneurial funnel framework for smart entrepreneurship development



For the ease of understanding, turn-out rate in every stage represents percentage of participants attending that stage out of total number of registered participants (at the beginning or 1st stage of orientation-cum-motivation program). However, in every next stage of activities, only those participants have been allowed to participate who have successfully completed all the previous stage(s) of activities, no direct jump was allowed to any participant to skip any **one** of the above defined sequential procedures.

Following table-1 provides the policy framework which integrated two interlinked and interdependent parts: Part-I describe the framework for smart village development which consists of two major steps as selection of village and formation of consortiums, and Part-II describes the funnel framework for smart entrepreneurship development through six-different steps.

Table 1: Description of integrated policy framework for smart village development and smart entrepreneurship development

Steps	Description
PART-I: FRAMEWORK FOR SMART VILLAGE DEVELOPMENT	
I. Selection of a village	<ul style="list-style-type: none"> • Selection of an under developed village based on any set-criteria, or • Village adopted by any institution / agency / Member of Parliament (MP) / NGO etc. for its transformation into smart-village.
II. Formation of consortium of expert institutions for smart transformation of the selected village into smart village	<ul style="list-style-type: none"> • Formation of different consortiums of academic institutions or Universities / Govt. Departments / private agencies / cooperatives / NGOs / CSR departments from corporates based on their similar working areas / discipline / expertise for the infrastructure development, social, economic & environmental development including entrepreneurship development for the transformation of under developed village into smart-eco social village. • Followings are some important expert institutions for the formation of small consortium of the strategic alliance <ol style="list-style-type: none"> a) Govt. departments, district administration, panchayats including corporates (through CSR funds) for necessary infrastructure development (road, panchayat building, canal, drinking water facilities, water bodies) and provision of rural services (school, hospital). b) KVIC, district industry centre (DIC), bank, academic institutes / university and private agency for entrepreneurship awareness and promotion in the village and capacity building of the potential entrepreneurs. c) KVKs, agriculture universities/colleges, district agriculture department, agriculture / farmers cooperatives and private agriculture development agencies for agricultural transformation in the village. d) Expert NGOs and local academic institution / college / primary-cum-middle school / community organization for the social development in the village.
PART-II: FUNNEL FRAMEWORK FOR SMART ENTREPRENEURSHIP DEVELOPMENT	
I. Entrepreneurship awareness-cum-promotion program	<ul style="list-style-type: none"> • The responsible consortium for the entrepreneurship development should initially create awareness about the entrepreneurship among the villagers and rural youth through door-to-door visit in each household of the village. • The students of higher academic institutions / universities can play important role in such awareness programs however they need to be trained before involving in such activities under the rural immersion / village adoption academic programs.

	<ul style="list-style-type: none"> • After the entrepreneurship promotion campaigns, the consortium / responsible agency should organize short-term 1-2 days' entrepreneurial motivation-cum-mind mobilization program separately for male & female in the village and ensure maximum participation of people.
II. Entrepreneurial competency mapping/assessment	<ul style="list-style-type: none"> • The responsible consortium / institution / agency should conduct entrepreneurial competency mapping / assessment of all interested individuals through interviews / using other suitable tools. • The aim of such competency mapping / assessment exercise is to identify the potential entrepreneur in order to facilitate them in their entrepreneurial journey.
III. Capacity building program (Basic-level)	<ul style="list-style-type: none"> • Conduct short-term one-week capacity building program (basic-level) in the village itself for the interested potential entrepreneurs who have qualified in the above competency mapping / assessment exercise. • The focus of the above capacity building should develop the basic managerial-cum-technical skills and abilities among the participants.
IV. Capacity building program/Competency development program (Advanced -level)	<ul style="list-style-type: none"> • Conduct long-term about one-month (advanced) managerial-cum-technical competency development program for the turned-in potential entrepreneurs who have actively participated in the basic level capacity building program. • This advanced capacity building program should be conducted by the expert institutions of the entrepreneurship consortium preferable in an institutional setup (academic institute or training organization) where practical sessions can be easily conducted. • During the long-term, apart from the technical session by experts, the different types of group / team based activities including industry visits, market research, detailed project report (DPR) preparation and also invite successful & failed rural entrepreneurs to listen their entrepreneurial experiences. • After a meaningful number of sessions in the program, the potential entrepreneurs can be asked for the product selection for their perspective business enterprise. • This long-term advanced capacity building program should be conducted preferably during off-season when villagers/farmers feel free from agricultural activities.

V. Business support in enterprise setup: handholding, incubation, bank-linkages, market linkages and seed-finance	<ul style="list-style-type: none"> • The potential entrepreneurs who have successfully completed the above long-term capacity building program requires facilitation in establishing their enterprise. • They need guidance and facilitation in terms of hand holding, incubation, and other support in their enterprise set-up. • They should be facilitated in bank linkages of their enterprise and linkages with district industry centre (DIC) (or any other Govt. department having such schemes for financial support in the form of seed-financing / funding / grants to potential entrepreneurs) • The facilitation is also required for market linkages of the enterprise.
VI. Performance measurement towards business sustainability	<ul style="list-style-type: none"> • A mentor should be assigned to each potential entrepreneur by the entrepreneurial consortium for long-term who will be regularly observing the enterprise performance and also act as business advisor to ensure the success of the venture in attaining business sustainability. • Presenting the successful entrepreneurs as a role model to motivate villagers and rural youth towards entrepreneurship.

Source: Developed by the author

5. Conclusion and policy implications

The study has emphasized that rural areas despite large population share in the country are highly deprived and still far behind than its urban counterpart. The rural areas are faced with challenges in access to basic services, infrastructure and economic opportunities. The “Smart Village” is an innovative approach in rural development policy which aims at providing smart and sustainable solution to multiple rural problems with ultimate goal to improve the quality of life of rural masses. The driving motivation behind making “Smart village” is that the (Digital) technology acts as a catalyst for rural development by enabling environment for easy access basic services like healthcare, quality education, e-governance, renewable energy and clean drinking water. The smart villages offer many benefits of 21st century life similar to urban living while retaining aspects of rural life. The study has highlighted that smart villages are the need of the hour as to equip 21st century Indian villages with all required infrastructure and basic services to realize the dream of Mahatma Gandhi's vision of ideal village and economically self-sufficient and self-reliant villages.

Rural entrepreneurship development is widely recognized as a key driver of rural economic growth. Though, the Government and other agencies including NGOs have made several entrepreneurial interventions in the villages through various schemes and programmes but the desired success couldn't be achieved. The study has introduced “smart entrepreneurship” as a strategic innovation that adopts consortium approach for the entrepreneurial interventions in the village towards creating sustainable rural enterprises for making self-reliant smart village economy. The study has developed policy framework for smart village development and smart entrepreneurship development in the villages. This integrated policy framework comprised of two integrated and inter dependent parts: (I) smart village development through

smart transformation of an underdeveloped village, and (II) smart entrepreneurship development as per entrepreneurial funnel framework. The framework for smart village development guides to the project implementing authorities and consortium members for smart-interventions in the selected village. While the entrepreneurial funnel framework sets the procedures for the identification of potential entrepreneurs through a series of interventions which comprised of entrepreneurship awareness-cum-promotion programme, competency mapping, training & capacity building, business support for enterprise setup (incubation, bank-linkages, market linkages and seed-finance) and performance measurement & mentoring towards attaining the business sustainability. The ultimate aim of the entrepreneurial funnel framework is to provide an effective policy framework for smart entrepreneurship development form a king self-reliant smart village economy.

This policy framework has implications for policy makers, government functionaries and other development agencies including NGOs & CSR departments of corporates for smart village development and effective design and implementation of entrepreneurial s at the village level.

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