

**The Nexus of Rural Economic Development and Rural Support  
Program: Policy Lessons for Pakistan**



**By**

**Shaista Rafiq**

**Thesis Supervisor: Dr. Karim Khan**

**PIDE School of Public Policy**

**Pakistan Institute of Development Economics (PIDE), Islamabad**



Pakistan Institute of Development Economics, Islamabad

*PIDE School of Public Policy*



**CERTIFICATE**

This is to certify that this thesis entitled: “**The Nexus of Rural Economic Development and Rural Support Programs: Policy Lessons for Pakistan**” submitted by **Ms. Shaista Rafiq** accepted in its present form by the School of Public Policy, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree in Master of Philosophy in Public Policy.

Supervisor:

**Dr. Karim Khan,**  
Associate Professor,  
Pakistan Institute of Development Economics,  
(PIDE) Islamabad.

External Examiner:

**Dr. Miraj ul Haq**  
Assistant Professor,  
International Islamic University,  
Islamabad.

Head,  
PIDE School of Public Policy:

**Dr. Abedullah**  
Chief of Research/HOD  
Pakistan Institute of Development Economics,  
(PIDE) Islamabad.



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## Introduction and Background

### Introduction

The subject of rural economy in developing countries is getting prominence because of the increasing urban-rural divide. According to the International Labour Organization (2016), in the year 2012, 88% of the extreme working poor lived in rural areas. The rationale behind this poverty could be that policy makers view large urban centres as engine of growth and ignore the economic significance of rural area (Organisation for Economic Co-operation and Development, 2014). Focusing solely on urban without considering the significance of rural economy lead to inefficiencies and causes growth-inhabiting inequality (*World development report*, 2006). A better urban-rural linkage is required for the sustainable development by adopting economic and social policies as well as interventions (Akkoyunlu, 2015).

To better develop the linkage, rural economy should not be viewed as simply agriculture based economy, and rural development must not take place unless we view rural more than farmers (Baig and Khan, 2006). The urban economy is characterized by co-location benefits, economy of scale, and high complex division of labour and prospects of forward linkages with national and international markets. On the contrary, rural economy is seen to be lacking the specialized workforce, innovation and so suffers from low productivity and is predominantly agriculture-based (David, 2013).

However, the established belief is questioned in the recent past with many cases and studies suggesting higher growth in the rural areas than intermediate or predominantly urban regions. Garcilazo, E. (2013) and (OECD, 2012) investigated the performance of 10 rural and urban regions and concluded that the rural regions contributed more to aggregate growth compared to urban centres. The case of China's rural economy is another example that substantiates the potential of rural economy. The overall contribution of village enterprises to Chinese Economy by 1995 include generation of one quarter of GDP, two-thirds of rural output, 45 percent of the gross industrial output and more than one third of China's export earnings (Zhang, 1999). Moreover, they employed more than 130 million people that accounted for 18 percent of total labour force (Rawski, 2003).

The presence of evidence of rural regions on high growth trajectory and regions with dismal economic performance evoke the need to identify and examine the determinants that put them on different growth trajectories. In the light of the examination, policies for rural development must then be devised to help rural communities to tap their potential and maximize their contribution to country's aggregate GDP.

### Significance of Rural Economy for Pakistan

In Pakistan, like many other developing countries in the region, vast majority of the population lives in rural settings. The rural urban population ratio in the country is 63% and 37 % respectively. Agriculture is the mainstay in the rural area. Its contribution in GDP is 24% and employs half of the labour force either directly or indirectly (Khan and Khan, 2018). Even the sector has been contributing significantly in the overall economy since mid-1960s and even before that but the recent volatile weather patterns, climate change, and degradation of country's natural resources have put the country's agriculture sector and so the rural economy at disadvantage (Spielman et al., 2017).

In addition to traditional reliance on agriculture, non-farm sector is increasingly becoming an area of interest both for policy makers and academicians in Pakistan (Malik, 2008). Surveys in the recent past, captures the trends in the rural transformation in the form of diversification from farming to non-farming sector. This trend is also evident globally. In Asia, Africa and Latin America, non-farm sector contributes respectively 51%, 37% and 47% in the rural household income and the share is on the rise (Haggblade et al., 2007). In Pakistan, the exact share of the non-farm rural household income is not known, at least in author's knowledge. One study carried out by (Farooq, 2015) on rural non-farm economy in Pakistan reveals interesting facts regarding the role the sector plays in the overall economy. The study extrapolates the PSLM Survey 2010 and suggests that approximately 5 million rural enterprises exist in Pakistan. The distribution pattern of non-farm economic activity among population in Punjab, KPK, Sindh and Baluchistan are respectively 26%, 24%, 15% and 18%. These activities are predominately in trade and services. As for the manufacturing and production, only 12% of all the enterprises are functional in the sub-sector.

Irrespective of the fact that the economic activity in the rural setting is farm or non-farm, it faces several issues that impede its growth. In addition to *force majeure* and human-driven degradation of natural resources are the issues of poor education, low skilled workforce and so low productivity that affect the economic activity and so the socio-economic conditions of the rural areas. Other reasons include but not limited to low level of socio-economic conditions (e.g. household assets, livestock, poultry, agriculture land), low opportunity for employment, and poor infrastructure i.e. roads, sanitation facilities and lack of access to clean drinking water (Padda and Hameed, 2018). This is evident from the Pakistan Rural Household Survey (Institute (IFPRI) and Strategies (IDS), 2018) where it determines 44% of households in rural Pakistan live at poor and poorest levels. Coupled with lack of know-how and infrastructure are the issue of issues of critical mass, distance and density factors that aggravate the overall sustainable economic of the rural areas (Organisation for Economic Co-operation and Development, 2014) and the same applies also to Pakistan rural setting.

In view of the situation in Pakistan's rural area, there is a need for policy intervention for sustainable rural development in the country. Significant share of agriculture in the GDP, increasing trend of globalization, availability of ICT technology even in the rural areas, and last but not the least the pressure of rural-urban migration warrants timely intervention not only to ensure the food security in the country but also to improve the overall socio-economic by creating employment opportunities particularly in the rural areas of Pakistan.

To do so, several interventions can be carried out including rural transformation policy design, investing in human capital and foster an environment of innovation, improving the institutional quality and better connectivity. The focus of the current study is to work mainly on the policy aspect to promote sustainable economic development in the rural setting. For this to happen, several development models particularly applied in rural settings can be studied, and an indigenous rural development model need to be developed that in turn require policy interventions at federal and provincial levels to implement the proposed model.

#### Brief Overview of Rural Development in Pakistan

Plethora of research has been carried out on rural transformation, rural economy and rural enterprises (Abrham et al., 2015; Carter Leal, 2016; David, 2013; Dower, 2013; Haggblade et al., 2007; Hodge and Midmore, 2008; Lowe and Ward, 2007; Steiner and Atterton, 2015). From the literature it is evident that rural economy and so enterprises can play significant rule in reducing

poverty by providing employment and income to the poor and ultimately stops depopulation that normally happens because of rural-urban divide. Because of many social, economic and environmental benefits, the policy makers worldwide have realized the importance of rural policy to improve the socio-economic conditions therein. For this purpose, development models and approaches have been proposed and implemented(Hodge and Midmore, 2008).

In the context of Pakistan, two approaches have been used so far to serve the purpose: top-down approach and bottom-approach. In the 1950s and even before, top-down approaches were the predominant development planning approaches, characterized by external technologies and national level policies (Ellis and Biggs, 2001). In the era of British India, “Panchayat” and “Dehat Sudhar” concepts were launched to transform the rural economy(Gill et al., 1999). After independence, Village-AID Program (Village Agriculture and Industrial Development) was started in 1952 that continued till 1962(Heaney-Mustafa et al., 2018). Afterwards, Rural Works Program (RWP) started in 1963 to uplift the rural economy. However the program was abandoned in 1972 (Yaseen et al., 2015). Other programs that followed include People’s Works Program (PWP), Integrated Rural Development Program (IRDP) and Barani Area Development Program. Thereafter, in 1979, the IRDP and PWP were merged to form a new initiative, re-designated as Rural Development (RD) (Gill et al., 1999). Moreover, “Tameer Watan Program”, “Social Action Program (SAP)” and “Khushal Pakistan Program (KPP)” were among the other initiatives that were launched to improve the social and economic indicators(Luqman et al., 2013). Despite so many initiatives, rural economy is still struggling and sluggish. All the programs failed to achieve the desired objectives for one or other reason. Among the reasons of failures include lack of coordination among line departments, lack of adequate training to the workers involved in these programs, financial constraints, and low level of participation at community level. Most importantly the reason for the failure of the programs is the top-down approach to rural transformation(Butt et al., 2015).

Keeping in view the failure of the top-down approach to rural transformation, bottom-up approach emerged in the 1980’s and 1990’s. In Pakistan, The Agha Khan Rural Support Program (AKRSP), which took inspiration from Dr. Akhtar Hameed Khan conceptual framework of rural development, was initiated in 1982 with focus on enhancing the capacity of the people (Northern Areas and Chitral) to sustain and improve the quality of life(World Bank and Operations Evaluation Department, 2002). The basic premise of the framework is that people at gross root level should be empowered to transform their localities.

Other rural support programmes (RSP) that followed on the pattern of AKRSP include Sarhad Rural Support Programme (SRSP), National Rural Support Program(NRSP), Punjab Rural Support Program (PRSP) started respectively in the years 1989, 1992 and 1998 (“Rural Support Programmes Network,” n.d.). By 2000, seven RSP were in operation across the country. As of now, 10 RSPs and one Institute of Rural Management (IRM) have been brought under the Umbrella of Rural Support Programmes Network (RSPN) and has become the largest development network in the country with presence in 137 out of 148 districts and have an outreach to 7 million rural households in Pakistan (RSPN, 2017).

Although the RSPs have somehow contributed in the uplift of the rural development but the focus remained primarily on improving social indicators like sanitation, health and education in addition to infrastructure development(Khan, 2009). Economic aspect is barely touched and economic opportunities is still lacking in the rural areas (Luqman et al., 2013). Because the RSPs focus remained on how to create synergies between administrative, political and socio-pillars to get the

projects done effectively and efficiently (“Rural Support Programmes Network,” n.d.). Moreover, the RSPs have been emphasizing on giving power to local communities to make decisions that affect their well-being and participate in the local development by giving them confidence and empowerment(Khan, 2009). However, significant economic uplift has not been reported due to the programmes in the literature(Mirza et al., 2017).

The reason being is the missing economic development model in the overall framework of the rural support programmes. Although, the capitals they rely on include social, human and financial capitals(Rasmussen et al., 2004). In the RSPs, social capital is organized in three tiers: local, village and union council levels through Local Support Organization (LSO), Village Organizations (VOs) and Community Organizations (COs) respectively(Khan and Khan, 2012). These programs are funded through multiple sources including Pakistan Poverty Alleviation Fund; while the target group (or individuals) are trained to run the affairs on their own (Kakar, 2018). The three capitals are pre-requisite for any economic development; however, what determines its efficiency and efficacy is the governance of the three capitals to generate economic activities and economic well-being. Moreover, the RSPs focus more on individuals or communities to provide them with basic education but development of market and the complex nature of rural-market mechanism in addition to the governance of the three capitals to mark meaningful change in the lives of the rural communities besides others.

The aim of the current thesis is to study the rural development models employed in developing countries and draw parallels between them to identify good ideas, practices and lessons and identify means for rural policy development to transform current rural communities into a market economy and make them relevant in the overall market economy.

### Study Design

The following subsections briefly describe the objectives and research questions to be addressed in the current study. Study significance and limitations are also briefly outlined.

### Objectives of the Study

Recognizing the value and importance of rural economy for the uplift of rural region and kick start industrialization, efforts are required to develop rural policy framework. To this effect, following objectives are set out for the current study

1. To examine the contribution of the current rural support programs in terms of market economy development. Although the programs are mostly designed to cater to the needs of human resource development, health, and to some extent infrastructure development, they seldom focus on generating economic activity, if so, they would be documented.
2. Identify best practices globally for rural economy development including Chinese Township and Village Enterprise (TVE), Taobao Villages, Brazilian APLs and many other initiatives and their benchmarking.
3. Assess the strengths and weakness of the rural development models based on appropriate attributes, relevant for rural economic uplift.
4. Suggest recommendations for development of rural policy framework for Pakistan

### Research Question

In view of the objectives set for the study, following research questions are formulated.

1. What are the strengths and weaknesses of the existing rural support programs?
2. How the rural development models employed in developing countries contributed to the economic development in their respective countries?
3. What is the significance of rural support programs' interventions in rural economic development?
4. What can be learnt from rural development models globally and are they relevant in the context of Pakistan. If so, what can be replicated in Pakistan keeping in mind the social, political, technological and legal dimensions of the country?

#### Significance of the study

The study is important in several ways especially for developing countries like Pakistan. For instance, much of Pakistan's population live in rural areas, however the policy makers and decision makers' focus are always on industrial estates and industrialization in or near the urban centres. This has resulted into population migration towards big cities which in turn has created several issues including congestions, health and environmental problems for the centres. Moreover, the rural-urban divide is deepening and so creating social unrest and regional disparities across the country. In this backdrop, rural economic uplift and rural market economy should be given due attention and the current study is one such attempt to pave the way for rural development in terms of employment generation and value addition in the rural areas.

#### Study Limitations

No study is without limitations and the current study is not an exception. Major limitation of the study can be the collection of primary data or secondary data regarding the success of these programs especially NRSPs in Pakistan. Another limitation would be the availability of expert opinions on diverse initiatives and rural models applied globally to reach consensus about their strengths and weaknesses. Lastly, the rural programs and other initiatives for rural developed applied globally are developed with diverse objectives in mind ranging from social service provision and supporting micro enterprises as is the case in Pakistan to SMEs supporting to engage in global value chains (the case of APL in Brazil and TaoBao Villages in China), their comparison seems inappropriate as they evolved in different eras, economic and political systems with diverse focus, still they are initiatives started for rural and peri-urban development and there are lessons to be learnt from these initiatives.

#### Methodology

To approach the problem, this study will rely on Multi criteria decision making MCDM, also called multiple attribute decision making (MADM). The MADM is used when a choice has to be made out of many discrete actions or options in the order of desirability based on pre-determined list of criteria (attributes). The objective is to assist decision-maker in the decision-making process. The MADM in the process of selecting best option also determines the relative importance of individual attributes quantified through weighting mechanism through pairwise comparison using swing method. Mathematically, the decision model can be represented as follows:

$$\mathcal{V}(X) = F(v(x_1), v(x_2), \dots, v(x_n)) \quad \text{Equation 1}$$

Where,

$x \in X$  represents an attribute of set  $X$

$v(x)$  is a utility/value function of an attribute

$\mathcal{V}(X)$  is an overall utility function for the set  $X$

$F$  is an aggregation operator

So, the decision problem is to construct a utility functions (or value functions) as well as an aggregation operator. For the sake of simplicity, Weighted Mean (WM) will be used as an aggregation operator to compute the overall score of options in the decision problem.

$$\text{WM}(v_1, \dots, v_n) = \sum_{i=1}^n w_i v_i \quad \text{Equation 2}$$

Where  $w_i$  corresponds to the weight of the  $i^{\text{th}}$  attribute

So, the overall purpose is to construct the utility functions for attributes in many options to evaluate their relevance in the rural development and so use them as determinants of rural economic development and employ them in the rural policy framework.

Thesis Organization

The current thesis is planned as follows

The first chapter Introduction and Background briefly explains the rationale for carrying out the study and identifies objectives and research questions in addition to the significance and limitations of the study.

Chapter 2 reviews rural development literature to study the pros and cons of the rural development models employed in developing countries to explore the many aspects of rural development in those countries.

Chapter 3 presents the Methodology in detail on how to approach the problem of rural development; what determinants to focus on, how to weight them for employing in the rural policy framework and would it be viable in Pakistan's rural context.

Chapter 4 explains the results of the evaluation carried out using MADM method. MACBETH Software has been used for the evaluation. The Chapter also presents policy directions for rural development in Pakistan





## Literature Review

Literature on the success of the rural support initiatives varies from country to country. In the case of Pakistan, the literature is rather limited because little work has been carried out to examine comprehensively the efficacy and efficiency of the rural support programs in Pakistan. However, the literature abounds with case studies carried out on one or other of the interventions of RSPs in their respective areas (Ali, 2007; Callen et al., 2013; Javed et al., 2006; Nawab and Israr, 2015; Riaz et al., 2014; Shah et al., 2015; Tahir et al., 2016; Taj et al., 2012). Other studies identify the success factors or impediments in the way of RSPs implementations (Hussain and Hussain, n.d.; Khurshid et al., 2016; Mirza et al., 2017; Saqib, 2001; Settle, 2012). Before we go to explain in detail the success factors and the dynamics of each program, we go through the underlying principle for rural uplift, the organization structure and the functioning of the rural support programs. It would be followed by rural development models employed in the developing countries to draw lessons from and use some of the aspects as benchmark for rural development in Pakistan.

### Rural Support Programs in Pakistan

The fundamental premise on which the rural support programs are based is the concept of *social mobilisation*. Since, majority of the programs initiated in the past have not yielded the desired results. The reason for failure of the most program is top-down planning without active participation of all the stakeholders, focusing on growth with the assumption that wealth generation through interventions will trickle down automatically to poor strata (Shah, 2009).

In response to the failures, the participatory approach of development was promoted through social mobilization. The idea dates back to 1960's when the participatory approach was developed and implemented in Camilla, Bangladesh. Later the Agha Khan Rural Development program was started in 1982 in Northern Areas of Pakistan and finally the concept was replicated with rural support programs (RSPs) initiatives in all the four provinces of Pakistan (Rasmussen et al., 2004). The following diagram shows the development in the rural support programs in the chronological order as shown in Figure 1.

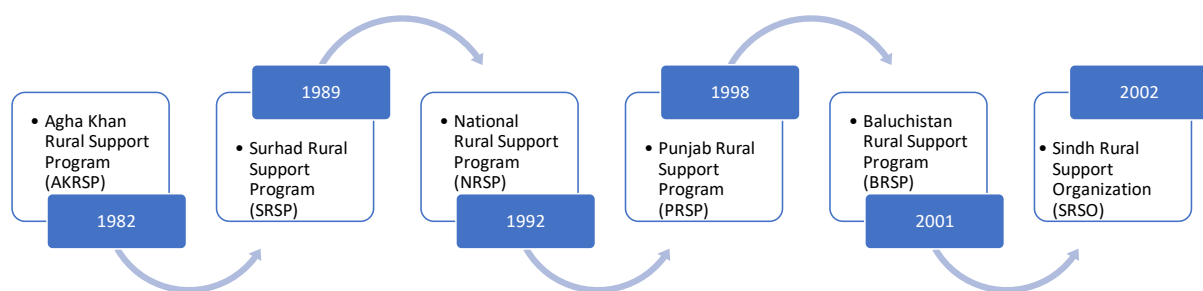


Figure 1: Rural Support Programs Development in Pakistan

Each of the program is briefly discussed in the following sections.

### Agha Khan Rural Support Program

The Agha Khan Rural Support Program is a private, noncommunal and not for profit company started by Agha Khan Foundation in 1982 to serve the community originally in the Hunza valley, Gilgit Baltistan. The program was later extended to the whole Gilgit Baltistan and Chitral region. The objectives of the program evolved overtime. As per the strategy paper (1983), the objectives of the program was *“to develop an innovative replicable model by a small [nongovernmental organization] acting as a catalyst of rural development through working with local people to identify and appraise project opportunities, to promote the provision of needed services for tackling problems of high mountain areas”*. Later on, the program focused on doubling the income of the people in the region over a period of 10 years. Capacity building was focused in the latter stages and now the program overall objective is to improve the quality of life of the people through capacity building in the northern region of Gilgit Baltistan and Chitral.

The underlying concept of the program is that the local communities are capable to plan and manage their own social development on the condition that they are provided access to necessary skills and capital.

The program has contributed to the socio-economic development of the regions and some achievements are remarkable. Among them, increase in income of the residents of the targeted area, construction and rehabilitation of more than 4000 projects that include bridges, roads, irrigation channels, hydropower units and other small projects. Moreover, the program has planted tens of millions of trees in the mountainous targeted region and has developed hundreds of acres of marginal lands. Also, the program has prepared and trained a cadre of more than 50,000 community activists, has mobilized nearly \$5 million village savings, and has established as of now more than 4,993 community organizations.

AKRSP has supported community organizations in the region of interest. These organizations have established patterns of local governance that is characterized by participation, transparency and accountability and which is democratic in nature. They are now federating at the union council level to establish Local Support Organization (LSOs).

As of now, there are 67 LSOs across the region and have established a good working relationship with not only government departments but also local development partners, aid donors as well as private sector actors. This partnership is aimed at increasing the scope and outreach of services for their member communities. The program achievements have been acknowledged on number of forms and have won a number of awards, including the 2005 Global Development Awards for most Innovative Development Project and an Ashedn Award for Sustainable Energy in 2004.

### Sarhad Rural Support Program

The AKRSP performed satisfactorily in the northern areas of Pakistan (World Bank and Operations Evaluation Department, 2002) and so the model was replicated in the Khyber-Pakhtunkhwa province in 1989 (Shah, 2009).

The SRSP is presently working in all the districts of KP including the newly merged districts (erstwhile FATA). As of June 2019, the SRSP have formed 43,825 COs with 2,600 VOs, and 184 Los (SRSP Annual Report, 2018-19).

Thus far, SRSP have conducted number of interventions in different districts of Khyber-Pakhtunkhwa. Fresh water supply schemes, woman empowerment through entrepreneurship development projects, small hydropower projects, value chain development in addition to infrastructure projects all across KP are among the list of projects being carried out by the SRSP. In the women empowerment through entrepreneurship, the projects contributed to the overall income of women entrepreneurs. An estimated 150% increase in the income of women trained by SRSP was recorded (SRSP). Also, the SRSPs through its power projects intervention has generated 28 MW of power (SRSP Annual Report 2018-19). Moreover, value chain development project was carried out in Malakand. The net benefits of the project are as follows (“Publications New | Sarhad Rural Support Programme SRSP,” ).

1. *Members of Red & Black Persimmon Value Chain have scaled up their annual production and recorded upto 157% increase in income/ member/cropping season.*
2. *350 rice farmers recorded 81% increase in yield & 154% increase in income.*
3. *1,200 lemon grass & olive farmers earned PKR 460 million/anum.*
4. *The off-season gladiolus showed an encouraging four-fold increase in comparison to traditional vegetables/crops.*
5. *The Walnut producers and small local traders have increased their income by PKR 17.4 million in 4 years.*
6. *Shogori Pear & honey producers enjoyed a handsome extra income of PKR. 45 million from sale of their products.*
7. *Onion farmers were able to produce 15,000 kg of onion seed generating PKR 30 million.*

Studies have been conducted to evaluate the impact of the SRSP interventions on multiple indicators both economic and social. A study was conducted to evaluate the impact of micro-credit on livestock enterprise development (Ali, 2007). The study concluded that the micro-finance provided to farmers in Abbottabad region improved the income level, consumption pattern and education level of the beneficiaries. On the gender inequality the program have designed interventions to mobilize woman and to make them capable to participate in the development of their villages (Idrees et al., 2008).

#### Punjab Rural Support Program

The Punjab Rural Support program was started in November 1997 and registered under section 42 of Companies Ordinance, 1984. The program aim was to uplift the rural community in Punjab province of Pakistan and improve the socio-economic condition therein.

The program is actively operating in 20 districts of the Punjab. The operations under the program are overseen in 3 Regional Offices of Faisalabad, Sialkot and Multan and operate 65 —Social Mobilization Teams|| (SMTs). The mission is to curb poverty in the 20 districts and increase income of the households and empower the marginal ones to improve the quality of their lives.

To achieve the objectives, the PRSP's organize the poor households like other RSP programs. The focus is to create solidarity groups and build their capacity so that they are capable to explore and grasp opportunities and create many if not available and approach poverty alleviation in their respective areas. The program provide them social guidance and give the marginal one the

counselling on how to curb poverty. Also, the program run programs of advocacy and provide technical assistance through specialized organizations.

PRSP like other RSPS emphasizes on harnessing the potential of the people and supplement them through diverse interventions. To this end, grass root level organizations are being established to help them develop plan and schemes for productive employment. Awareness about efficient use of resources for productivity enhancement is also part of the program.

For harnessing the potential of the people, Community Organizations (COs) are being created. With COs people have feeling of strength and this feeling is rooted being part of the community and from being together. They are trained to focus on needs; to make them capable of developing plan; encouraging them to pool their resources; educating them to reduce overheads while pushing them to achieve economies of scale, etc. The program also look for genuine activists within the community because genuine activist from the community has no substitute. To achieve these objectives and many other, the PRSP budget allocation for the year 2017-2018 was Rs. 421 Million.

A number of studies have been conducted to assess the impact of various interventions in the target districts. For instance, the impact of microfinance on poverty alleviation in the district Mandi Bahauddin was investigated and a rather positive impact was found in the targeted population who got loans from the program (Tahir et al., 2016). Also, (Javed et al., 2006) also explored the benefits of the micro-credit on agriculture productivity particular; however the authors suggested to increase the loan size to maximize the benefits of the intervention in the selected areas of Punjab. In another similar study, the micro-credit impact on women participation in animal rearing was investigated and the contribution of the intervention was found to be significant with recommendation to increase the loan size and reduce the interest rate (Taj et al., 2012).

Like SRSP, the PRSPs also has designed interventions to promote women entrepreneurship in Punjab. Skill development trainings were given to rural women in targeted areas including but not limited to tie & dye, fabric paintings, glass paintings, beautician course, stitching, livestock, bee keeping so on and so forth. The trainings positively influenced the decision-making, self-confidence and self-reliance. The paper also suggested on how to improve the training materials to get maximum benefits from the trainings (Riaz et al., 2014).

#### Sindh Rural Support Organization

Sindh Rural Support Program (SRSP) was launched in 1995. The objective was to reduce poverty in Sindh rural areas in order to promote sustainable development.

Like other RSPS, the SRSP emphasizes to reach to deprived rural community particularly women, farmers with small land holding and wage earners. The disadvantage social groups in the rural areas are victims of the defective development planning that took place over the years.

SRSP is not only reaching directly to the disadvantage social groups but also works on building the capacity of other NGOs functioning in the area for the same purpose. Technical assistance is being provided to improve their organizational capacity. This also fits well with the underlying principle of participatory development which is at the core of all RSPs including Sindh Rural Support Program and which all of them claim to be. Besides training, research is carried out and advocacy is also performed in order to create enabling environment not only for the SRSP but also for other NGOs aligned with the former.

Support is also provided on financial front such as provision of micro credit and their optimum use for poverty alleviation are the roles the SRSP is providing in the targeted areas. Micro credit to carry out small infrastructure projects in multiple areas such as health, education, water, electricity and roads are on the agenda of RSP (Hassanzada and Zakir, 2018).

#### Baluchistan Rural Support Program (BRSP)

BRSP is registered under Section 42 of the Companies' Ordinance 1984, as a not for profit organization and is the largest network in the province working on poverty reduction and household empowerment through community development approach and also active member of NRSP.

In Baluchistan, to cater to the needs of the impoverished and disadvantaged community, Pak-German self-help project was initiated in 1983 which later evolved into BRSP in 2001. The integrated rural development program carried out in Baluchistan at a limited scale facilitated transformation and evolution of the project into BRSP. Since then, the BRSP is actively engaged in supporting the rural communities in the Baluchistan province of Pakistan.

The BRSP is run by Government of Baluchistan through Local Government & Rural Development Department (LG&RDD) and supported by German Agency for Technical Co-operation, also known as GIZ.

As of now, the BRSP has presence in 26 districts of the province and fostered 34,293 community organization thus far while catering to 514,395 households ("<http://www.brsp.org.pk/>," n.d.). The program is involved in diverse activities including but not limited to poverty reduction, repatriation and rehabilitation, human resource development, water supply schemes and livelihood enhancement and physical infrastructure development ("[Annual Report-2016-2017](#)," n.d.).

#### Overall analysis of RSPs

Rural Support Programs have played role in the development of rural areas and has also championed the concept of the participatory approach in Pakistan. The programs have enabled the rural communities to take charge of their own development to some extent. They have also redefined the role and of NGOs and improved the functions of an NGOs (although they don't call themselves NGOs).

However, there is criticism on the approach adopted by RSPs. For instance, there is criticism the way the RSP model is implemented. For many the approach is very expensive due to high level of staffing and high salaries being paid to the employees. Moreover, the targeted households sometime are not categorized as poor. As per (Hussain, 2003) there is a household possessing two hundred acres of irrigated land and getting benefits from the program. Moreover, thirteen percent of the households have land holdings of over thirty acres and twenty per cent possess over ten acres of irrigated land. Viewing the statistics, one can say that much of the targeted community does not merit to benefit from the program.

Also, the participatory development approach has also received criticism. For instance, (Cooke and Kothari, 2001) in his book "Participation: the new tyranny" has severely criticized the misuse of participation term for advancing their own agenda. Community is invited merely to impose pre-conceived projects on community without taking their consent. Sarhad Rural Support Program was also studied in a study and the was found to be ineffective in terms of rural transformation (Ali, 2005). The author argues that the SRSP was constrained by macro forces and has made it

“subcontractor” performing activities with no real effect on ground. The author further elaborates that the participatory theory of development has lost its significance and over time has reduced it to little more than fashionable lip service. (Hussain and Miraj, 2018) has also analyzed the factors hindering participatory development in Pakistan and concluded that traditional leaders like Malak, Khan, Chaudhry or Wadara influences the participation process and monopolize the process in their favors. In short, despite presence in so many districts, the rural support programs have not achieved considerable progress.

#### Chinese Models for Rural Development

Chinese have a long and rich experience of rural industrialization and rural transformation. The rural restructuring in China started with the Great Leap Forward back in 1958. The dramatic failure of the Leap forward was followed by another experiment in the form of Township and Village Enterprise (TVEs). The model significantly contributed to the uplift of rural economy but overtime the model lost its significance and taken over by another wave of rural industrialization drive in the form of Taobao Village, the E-commerce platform. In the following lines each of the model is briefly explained.

#### Brigade and Commune Enterprises

Commune and brigade enterprises appeared in rural China before township and village enterprises. It happened in the era of “great leap forward” in 1958. The purpose of the enterprises largely micro enterprises was focused to modernize agriculture, enhance production in certain items such as steel, cement and fertilizers (reference). The production grew steadily over time in the Commune and brigade enterprise (CBE). The gross output value of the CBE reached Y9.25 billion in 1970 and Y27.2 billion in 1976(Putterman, 1997). In spite of the central government support, the Brigade and Commune Enterprises did not contribute as was expected. The real transformation in the rural areas happened with the opening up in 1978 and with it came the Township and Village Enterprises.

#### Township and Village Enterprises

TVEs have trodden a long path before becoming a success story. The basic premise of Chinese TVEs is “*Leave the land but not the village, enter the factory but not the city*”. The TVEs phenomena “absorbed surplus labour from farming, contributed to economic growth, raised rural income, generated fiscal revenues for local governments, and helped narrowed rural-urban gap”(“Township and Village Enterprises - Chinese Studies - Oxford Bibliographies - obo,” n.d.). The overall contribution of the TVEs to Chinese Economy by 1995 include generation of one quarter of GDP, two-thirds of rural output, forty five percent contribution in gross industrial output as well as more than one third of China’s export earnings(Zhang, 1999). Moreover, they employed more than 130 million people that accounted for 18 percent of total labour force(Rawski, 2003).

This phenomenal contribution was made possible because of many reasons. First and foremost, although publicly owned, TVEs were market and outward-oriented and responded quite efficiently to market forces. Also, they were mostly small in size, had enough autonomy in their operations. Moreover, they position themselves in areas where shortages of output were severe where cheap labour and other endowments were in abundance(Fu and Balasubramanyam, 2003). So, they specialized themselves in labour and resource-intensive sectors such as textile and apparel, leather & footwear, food processing and toys(Harvie, 1999). Variants of the TVEs existed in China. However,

broadly they can be divided into public and private TVEs and explained briefly in the following subsections.

#### Publicly owned Model

Two models exist for township and village enterprises development i.e. first is *publicly-owned* which are characterized by unique properties for example, they are market oriented and autonomous in their operations but small in size. Also, they are export oriented and competes with SOEs on that front, yet they are subject to hard budget constraints in most cases (e.g. the Southern Jiangsu model).

The most significant characteristic of public TVEs is that though they are publicly owned. However, not protected by the state and so not rent seekers. They follow the market discipline strictly. They are community owned, but town and village governments exercise the right of ownership on their behalf. The revenue generated through TVEs make an important source of local government revenues.

TVEs are initiated and established by township and village governments (TVGs). Chang and Wang (1994) stated various important roles of TVGs in development and support of TVEs. First, TVGs can assure TVE stakeholders and TVEs community a sense of security. This is very much needed to achieve long-term development. Second, TVGs can aid in managing TVEs in several ways. Since, market had not yet matured while market dynamics and intelligence yet to be understood even for the market-oriented talented citizens, TVGs there can provide them the support on that front by organizing major economic and political activities in their sphere of influence. Moreover, in a market still at infancy, institutions are weak and cannot provide the mechanisms, rules and regulations to settle disputes effectively and efficiently, TVGs step in and fill that bridge by acting as the only available local institutions having the authority to settle disputes which arise in the process creating TVEs. Third, TVGs also support TVEs to gain access to financial resource that is, bank loans. Moreover, the TVGs not only provide the guarantee for the loans obtained for the TVEs but also act as the executors of the collective financing and debt repayment system (Perotti, Sun & Zou, 1999). Moreover, TVGs also help TVEs to integrate with world economy.

#### Private ownership model

Secondly, private ownership model (e.g. the Wenzhou model in Zhejiang province) which is characterized by private ownership of TVEs (Sonobe et al., 2004). The example of Chinese TVE model is unique due to the fact that no other country experienced emergence of rural entrepreneurs and enterprises on large scale as did China.

#### Pearl River Delta model

Third model for TVEs is Pearl River Delta model. This model is characterized by foreign direct investment (FDI) and the focus is to manufacture locally and export globally. The roots of TVE development in history of China can be noticed in an era of late 1950s and afterwards when China entered into structural reforms and opened its economy to outer world. In short, during the reform period, the conditions for the TVEs and TVGs remained favourable. They got the support in the form of incentives during the period; market discipline was provided so to play fairly and thrive on. Such conditions enabled TVEs to blossom and to play its role in the rural economic development of China.

## TVEs Critical Analysis

TVEs had enlarged production capacity due to having excess of factor inputs as well as high productivity level. Additionally, the technological innovations in TVEs enabled them to utilize available resources efficiency which ultimately led to improvement in the overall competitiveness. These and many other factors enhanced the development potential of the country. In case of China, TVEs contributed substantially in China's overall growth and development, especially in rural areas. As per Zhang (1999), TVEs accounted for approximately a quarter of China's GDP. Also, the TVEs contributed to two third of rural output, and had a major share in the export earnings (approximately one third). Moreover, in the year 1999, the total industrial output was recorded to be 61 percent and the growth during 1988-99 period was estimated as high as 19 percent(Fu and Balasubramanyam, 2003).

The main driving force of TVEs success was engaging with industry. To achieve all optimal targets and development goals, industrial value addition in TVEs model was necessary. The TVEs phenomenon contributed to great economic growth in rural China in particular and China in general and significant amount of revenue generated through. This further enhanced the enthusiasm of the reformers in China. The taxes they would pay will increase the state's ability to manage the reform process; invest in the infrastructure to provide ease in doing business and other soft infrastructure such as education, health and vocational trainings to support the development process. So, TVEs provide in this way practical support to the development of China.

Moreover, rural population's per capita net income (both wages and income from household operations) was derived from and based upon on low skilled labour work and commonly agricultural products. However, with TVEs and getting into manufacturing and value adding activities, the rural population's per income increased. This improved their purchasing power which ultimately benefited the local economy and Chinese economy at large. Also, with TVEs labour force moved from substantial farming to more diverse sectors enhancing thus their economic competitiveness.

The TVEs also faced a number of challenges for survival and growth for example, budget constraint, access to outer broader markets, integration with world economy, systematic bookkeeping and accounting system, and bringing in bank loans(Liao, 2009). Township and village governments (TVGs), although facilitated TVEs to some degree in getting debts and credits from financial markets but couldn't facilitated them to repay their debts in case of default. Moreover, TVG operated in limited area with little authority to erect trade barriers to keep competition out and protect its TVEs. TVGs access to the state banking system was non-existent, because TVEs are historically institutionalized and labelled as part of the traditional rural sector; the modern banking system on the other hand was considered to be part of the modern urban sector. This difference in the perception and mindset did not allow the two to integrate and to support each other.

Other institutional challenges are status of TVEs as non-economic actors, increasing corruption of bureaucrats in advising TVGs officials, low monitoring, information asymmetry, and lack of personnel systems to establish labor relations. TVEs also cater pressures of job creation, and capacity building (Kung and Lin, 2007).

## TaoBao Villages

With the decline in the number of TVEs across China, another wave of rural transformation started to happen from the year 2013 onward. This time the rural transformation was happening with



Taobao Villages, a unique concept of e-commerce platform in the rural setting. Taobao village is the extension of Taobao.com, a platform similar to Amazon.com. Ali Research defines Taobao Villages as “a large number of online merchants co-exist in a village that do business mainly through Taobao.com, depend on the Taobao e-commerce ecosystem, achieve economy of scale and synergy”. Criteria for inclusion of a village in the Taobao village ecosystems as per 2014 Ali Research is as follows (“Research Report on China’s Taobao Villages (2015),” n.d.):

1. k are registered as residents of the village and conduct business in the village
2. the GMV(Gross Merchandise Value) or the total quantum of the commerce of the village should not be less than 10 million RMB
3. number of merchants in the village should not be fewer than 50, or at least 10 percent of the village households.

#### How Taobao Village Emerged?

Numerous cases show the wellbeing of Taobao villagers and the prosperity achieved through the platform over the years. Emigrant workers from the villages returned to their hometown and participated in building Taobao village. Known examples of successful Taobao villages include Shaji in Jiangsu province and Cao county in Shandong province to say the least.

The first generation of Taobao sellers were urban dwellers because they had internet access and fairly educated. However, with internet penetration in the rural areas provided opportunity to the rural residents to become part of the network economy.

Why Taobao villages emerged? Researchers attributed following reasons for the emergence of Taobao village (1). E-commerce is blossoming is all around especially in China and so presents immense business opportunities; (2) coupled with it is the symbiotic growth in e-banking, ICT and logistics industry with improved flow of services and goods; (3). Top leadership commitment combined with E-commerce platform aptitude to guide, nurture and invest further pushes the Taobao Villages to develop and grow (4). Lastly, the social cohesion and the culture that prevails in rural china also contribute to the flourishing of Taobao Villages. All the above four factors work alongside making the overall effect more than the individual effects and fuelling the growth of the Taobao Villages (XU et al., 2017).

#### Expansion of TaoBao Villages

First year of its inception in 2013, only 20 villages were registered as Taobao villages and its numbers are keep growing. As of 2018, their number rose to 3,202 (see figure). Taobao villages cluster together and form a town. Thus far, 363 towns have been formed of the 3,202 Taobao villages(see Figure 2). As per the KPMG and Ali Research conducted jointly in 2017 “*Metamorphosis: Garment Industry by New Retail-Transformation of Number One Online Category*” clothing is far ahead of any other items shopped online in China.

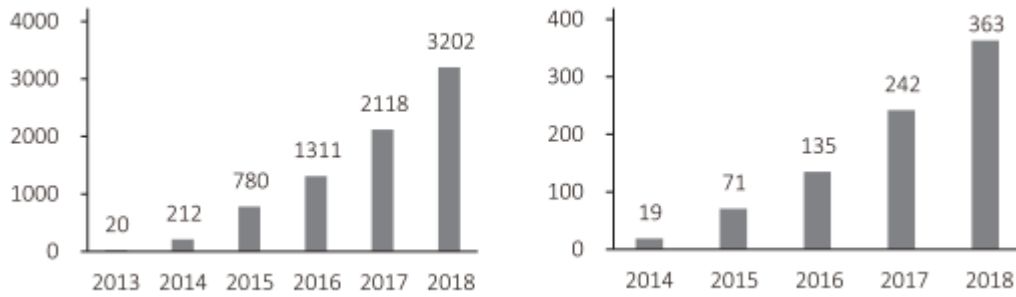


Figure 2: Number of Tao Bao Villages (left) and Towns (right)

In short, TaoBao villages helped rural china in many ways. It brings significant economic benefits to the local community. First it narrow down the income gap between rural and urban china by providing employment to the local people and has approximately increased household income by 20.5% (“Research Report on China’s Taobao Villages (2015),” n.d.). agglomeration of businesses in the rural china has also benefited the local governments while enlarging the tax base of the local governments, providing them the opportunity to reinvest in infrastructure and other social services(Qi et al., 2019).

#### Other rural models

Apart from participatory development programs and Chinese TVEs and Taobao Villages, other programs have been used globally to address the rural economic problems. For instance, in Brazil, several experiments were made before getting to the rural development model called Arranjos Produtivos Locais (APL) or Local Productive Arrangements. They are production systems made based on the endowment of the territory where competitive advantages come not only from the endowment but also from cooperation and the possibility of improving knowledge(Alderete and Bacic, 2012).

The Ministry of Development, Industry and Foreign Trade (MDIC, 2015) of Brazil conducted a survey and found that there exist 677 LPAs in Brazil in its 2175 cities. Moreover, the LPAs work in most of the sectors (59 of 87 sectors listed by National Classification of Economic Activities). Coverage of multiple sectors shows the representativeness and diversity of these agglomerations in the Brazilian scenario (Oliveira et al., 2018).

#### Conclusion

From the literature review, it was concluded that rural programs in the recent past have moved from the earlier position of focusing on agriculture development as the later was considered synonymous with rural development. More non-farm economic activities have also been focused across the world. Notable progress on this front has been observed in China with Township and Village Enterprises and now with Taobao Villages. The APLs in Brazil are industry focused and derive much of the underlying concept from the Italian industrial districts. However, in Pakistan the RSPs still very focused on social uplift with little to no innovation in creating economic activities in the rural setting.



## Methodology for Rural Programs Evaluation

For any rural program to remain successful, certain objectives and so criteria should be met. For instance, in the RSP programs, social mobility and social cohesion is the main theme to boost social development. Other focuses on making a trade-off in agriculture and non-agriculture activities to approach rural economic transformation. while a few are purely industrial focused as is the case of APLs and TVEs. The list can get longer if more and more programs are included in the scope of the study.

Which rural program is preferable over other depends on the objectives we want to achieve? However, broader objectives of any program remain the same: economic and social development but the means to get there can be different. In the case of Pakistan, it is pertinent to identify the means and the strength of means to be used for the rural transformation in the country and what means is used for what objective or combination thereof. But before that, it must be assessed in other rural programs which are part of the current study.

In this regard, a multicriteria approach is being proposed to assess the desirability of programs employing criteria or attributes needed for rural transformation. Other techniques could have been used for instance, the regression technique to estimate the impact of the interventions made in each program on the desired objective, for instance, rural income. However, data availability of the programs particularly for the Pakistani RSPs made it hard to go for the technique. Multi-criteria Analysis on the other hand can be employed with minimum data and by relying on expert opinion to find the optimum options. This is the reason, why the MCDM technique. In the following subsection, multi-criteria methodology has been briefly explained.

### Multi-Criteria Decision-Making Methodology

The Multiple Criteria Decision Making (MCDM) technique is a branch of decision sciences to find desirable options using criteria or attributes that are usually derived from fundamental objectives of scenario understudy. For instance, in the current study, the options can be the many rural programs around the world such as TaoBao Village, TVEs in China, RSPs in Pakistan etc. and the criteria can be agriculture productivity enhancement, social cohesion so on and so forth.

Multiple techniques exist in the literature and in practice for the MCDM such as Analytical Hierarchy Process (AHP)(Saaty, 1990), Measuring Attractiveness by a categorical Based Evaluation Technique (MACBETH) (Bana E Costa et al., 2012), ELECTRA (Figueira et al., 2009) so on and so forth. All the techniques employ value elicitation mechanism to transform the preferences and strength of preferences of decision maker into ordinal and/or cardinal scale. Moreover, AHP or MACHBETH is also used for relative weight determination in any decision context.

For the sake of the current study, the study relies on MACBETH Method which has been explained in the following subsection.

*Measuring Attractiveness by a categorical Based Evaluation Technique (MACBETH)*

MACBETH is multi-criteria interactive decision-making approach. The method was developed in the mid 1990's by Bana e Costa and Vansnick(Bana e Costa and Vansnick, 1994). The method employs a structure approach to solicit information and transform them into value functions using theory of measurement. This transformation into value function is performed using preferences (ordinal information) and strength of preferences (cardinal information) modeling while relying on verbal scale (). This approach to value function development is very natural to decision makers.

Four steps are involved to execute the MATCBETH namely 1). Context definition, meaning the overall decision context with list of criteria and options 2). Expression vectors determination that is, normalization of criteria involved for each option 3). Weight computation/elicitation and 4). Finally, aggregation of weighted individual score for each option. All the four steps are presented in

The context definition phase is to identify the objectives (and so the criteria) and options or alternatives. For instance, let X be a finite set of options i.e. option set: = {  $a_1, a_2, \dots a_l$  } that requires evaluation in terms of their relative attractiveness on the basis of some criteria or attributes;  $C = \{c_1, c_2, \dots c_n\}$ . Then scenarios for evaluations become:

$$S_1 = \{x_1^1, x_2^1, \dots x_n^1\}, S_2 = \{x_1^2, x_2^2, \dots x_n^2\}, S_3 = \{x_1^3, x_2^3, \dots x_n^3\} \text{ and so on.}$$

Where  $x_n^l$  represents the partial score of a criterion  $n$  in a scenario  $l$ .

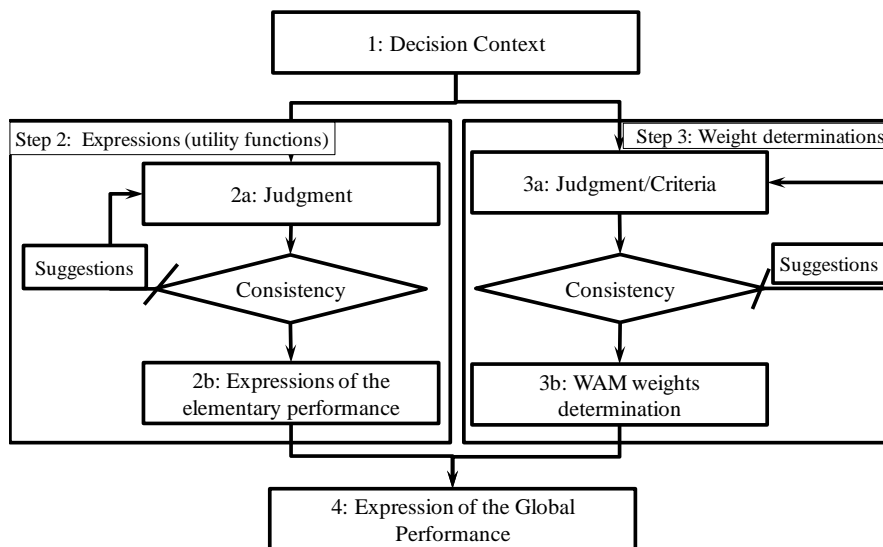


Figure 3: The MACBETH Steps (as outlined in Clivillé et al., 2007)

For the partial score to obtain, the options are ranked in the preferential order with no degree of preference (strength of preference). Verbal scale is then employed to elicit cardinal information or interval scale. In the MACBETH, 0 corresponds to Null, followed by 1 for Very Weak, 2 for Weak, 3 for Moderate, 4 for Strong, 5 for Very Strong and 6 for Extreme. For example, if you performs pairwise comparison and say suppose x is preferable over y then how much the verbal scale then determine the strength of preference. One can say that x is strongly preferable over y then strongly corresponds to 4 in the MACBETH scale.

So any preference can take any value in the range of 0 to 6. Here, the information over preferences is numerically represented, *i.e.* value function  $V_i: X \rightarrow \mathcal{R}$ .

In the next step, weights are elicited using pairwise comparison. For details about how the weights are determined and what techniques are used in the MACBETH, please see (Berrah and Clivillé, 2007).

Once all the utility functions/expressions are determined using MACBETH pairwise comparison of options for the list of criteria, the next step is to aggregate them and compute an overall score for an option. In decision-making context, aggregation is often used to combine the degree of satisfaction of all criteria in any option so that to obtain a value that corresponds to a global degree of satisfaction (Narukawa, 2010).

For a given option (scenario) noted  $S^k$ , the aggregated score is computed using Equation Error! No text of specified style in document.-3:

$$S^k: w_1 \times p_1^k + \dots w_i \times p_i^k + \dots w_n \times p_n^k$$

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Equation determines the overall score of an option in any decision context and can be used for ranking the options in the order of priority.

#### Application of Methodology

The Multi-criteria Methodology is applied to the rural programs studied in the literature. Th

#### List of criteria

To compare the identified options and to identify their strengths and weaknesses, a list of criteria has been identified. Most of the criteria are derived from the literature and other have been determined through brainstorming sessions on the rural development.

#### Social cohesion

Social cohesion is defined as the willingness of members of a society to cooperate with each other in order to survive and prosper. The willingness for cooperation is to form partnership in order to achieve set certain goals (Stanley, 2003).

For the sake of this paper, social cohesion has been defined in a narrow sense as it covers only the extent of cooperation between members of society for gaining economic benefits if opportunity strikes in a given locality. The broader perspective for the social cohesion defined by harmonious society, devoid of political conflict or dissent are not considered in the paper (Easterly et al., 2006). Social cohesion as an element for regional economic development has long been debated. European Union through its Cohesion Policy spells out the importance of the social cohesion for economic development (Iammarino et al., 2017).

#### Governance mechanisms

By governance, we mean the participation of local population in the decision-making process of the rural development or policy making and its implementation alongside public institutions. The first EU program devised for rural development that is, *Liasons Entre Actions de Development de l'Economie Rurale* (LEADER) had two important principles: principle of subsidiarity and principle of partnership. In the former, the aim was to take the decision making as close to the site of implementation as possible, the latter emphasized on replacing the hierarchical decision making structure by mechanisms involving representative from wide range of government and non-government groups (Macken-Walsh and Curtin, 2013). It also covers the many level of governance both local and national level that exist to implement and foresee the development. Rules and regulation compliance for execution is also part of the governance.

#### Increased agriculture productivity

Improvement in agricultural productivity is important and a cornerstone for the development of rural economy. Because agriculture growth creates employment and with it improves the rural income and capital for sustaining non-farm rural activities (Stamoulis and Zezza, 2003). Because agriculture plays a significant role in the development of rural economy by providing a stable base for changing livelihoods and facilitate the gradual transition from farm to non-farm rural activities in addition to essential environmental services. It also helps facilitate food security (R.P et al., 2007), the importance is therefore acknowledged in many rural development initiatives (Si and Scott, 2016). The rural transformation initiatives excluding the post-productivist model put agriculture at the heart of the rural development (Marsden and Morley, 2014). In short, rural development and agriculture development goes hand in hand; however, importance varies from region to region and even localities; yet again the importance of agriculture and agriculture productivity enhancement measures are widely recognized both in literature and rural policies.

#### Development of non-agriculture rural activities

Non-agriculture earnings is approximately 35-50% of rural household income in the developing countries (Haggblade et al., 2010). Agricultural household relies on the non-farm activities to diversify risk, moderate seasonal incomes swings and use the non-farm income for input purchases of agriculture that is seeds, fertilizers etc. (Woodhouse, 2010). with technology infusion particularly information and communication technologies in the rural space, the livelihood opportunities for the rural people have multiplied. The technologies have opened up new markets giving people in the rural areas the opportunities once available to the urban opulation (Mathur and Ambani, 2005). Apart from technologies, the renewed interest in village tourism concept in the policy circles unleash further opportunities to the rural communities. The idea is made part of the many development initiatives because it has served as a vehicle of rural development in certain regions (Drăgulănescu and Druțu, 2012). However, suitable strategies to promote village tourism are required keeping in view the local natural endowments, culture, and specific regional situations.

#### Value chains/Markets Development

Value chain concept has gained prominence in developing countries to enhance system efficiency and as a mean to get access to regional and global markets. The concept has expanded the agriculture food chains beyond borders and away from spot markets and loose form of coordination at arm length nodes and has strengthened the relationship between different value chain nodes (Mitchell et al., 2014). Moreover, the value chains have given opportunities to the rural economies

to produce for global markets thus put pressure on the rural economies to upgrade and produce high quality produce (organic food, for instance) but the same time demand for skilled workers and other allied services such as packaging, marketing, food quality standards and the associated services which itself have created more markets and opportunities in the support categories of the value chain.

#### Access to services

By access to services, we mean readily availability of services such as banks (micro finance banks), post offices, training institutes, health and education institutes that make the basic institutional infrastructure required for the smooth functioning of the rural economy. Due to the importance of the service delivery in the rural transformation, many initiatives in the rural transformation has included primarily this component in their agenda(Settle, 2012).

#### Policy options

This section deals with the question of regional development and the regional development and management policies. Development policies are mainly directed to how growth can be stimulated and how it should be distributed. To stimulate growth numerous models have been developed and applied globally. A few of the known models for rural development as options can be follows:

##### 1. Innovation and technology-based approaches (incubators)

In this approach, the underlying idea is that innovation is key to development process and therefore R&D or any other measure that foster innovation need to be incentivized to speed up development and growth in the rural areas. However, in the rural settings, lack of R&D facilities and institution does not foster innovation-based approaches. Examples are appearing where innovation led approaches have transformed rural development. For instance, Lapland Smart Specialization (S3) program to transform the challenges of the Arctic region into opportunities with focus on forestry, mining and tourism(Merenheimo et al., 2016). The region has been recognized as the most innovative sparsely populated (1.8 people/km<sup>2</sup>) part of European Union with 180,000 population having 90,094 companies with annual turnover of 1.2 billion euro. The region GDP is 5,600 million euros(["https://arcticsmartness.eu/,"](https://arcticsmartness.eu/) n.d.). Digital platforms and ICT foster innovation in the rural settings(Wilson et al., 2018) and has attracted entrepreneurs in the rural UK to turn their dreams into reality(["https://www.ruralbusinessawards.co.uk/,"](https://www.ruralbusinessawards.co.uk/) n.d.).

#### Industrial Districts

Industrial Districts Approach has its roots in the rural Italy particularly south of Italy. They are socio-territorial entities and evolved into the districts by number of enterprises/firms along with people that co-habit/remained in one place but united both by the socio-economic ties and by the territorial relationships. They are both horizontally and vertically integrated. Marshallian District is not much different from Becattini District (Italian Industrial District) in the sense that the former define the districts to be an aggregation of both professional and industrial activities in the same geographic area, while the latter defines the district in terms of community having shared value and set of history and identified by unwritten rules affecting the productivity and the structure of the district itself. The close relationship between communities and businesses within the district provides major thrust for innovation, knowledge and quality(Schilirò, 2017).



## APL approach

Less formal than industrial districts, the APL (*Arranjos Productivos Locais*) approach encourages the formation of groups of small local businesses in the same production sector. The Brazilian Government formed the APL policy in 2004 to support local business development. APL is now an important component of Brazilian economy. As per 2015 consensus, 667 APLs operates all over Brazil that encompass 291,498 firms employing over 3 million people. Almost half of the Brazilian municipalities are involved in the APL approach covering 59 sectors with ceramic, furniture, textile, engineering and food processing are the most representative sectors (“SME and Entrepreneurship Policy in Brazil,” 2020).

The aim is to foster innovation through spillover effect. APLs have to meet certain criteria; for instance, minimum number of firms in a given locality, the presence of internal governance mechanism, cooperation between participants of the APL.

APLs have evolved over the years. Initially the focus remained on trainings, workshops and technical assistance to micro firms. Later the concept evolved to supporting SMEs exports and technology transfer between SMEs and even supporting local firms to integrate in the global value chains.

## Chinese Rural Approach (Taobao)

With the decline in the number of TVEs across China, another wave of rural transformation started to happen from the year 2013 onward. This time the rural transformation was happening with Taobao Villages, a unique concept of e-commerce platform in the rural setting. Taobao village is the extension of Taobao.com, a platform similar to Amazon.com. Ali Research defines Taobao Villages as “a large number of online merchants co-exist in a village that do business mainly through Taobao.com, depend on the Taobao e-commerce ecosystem, achieve economy of scale and synergy”. Criteria for inclusion of a village in the Taobao village ecosystems as per 2014 Ali Research is as follows:

1. merchants are registered as residents of the village and conduct business in the village
2. the GMV(Gross Merchandise Value) or the total quantum of the commerce of the village should not be less than 10 million RMB
3. number of merchants in the village should not be fewer than 50, or at least 10 percent of the village households.

Numerous cases show the wellbeing of Taobao villagers and the prosperity achieved through the platform over the years. Emigrant workers from the villages returned to their hometown and participated in building Taobao village. Known examples of successful Taobao villages include Shaji in Jiangsu province and Cao county in Shandong province to say the least.

The first generation of Taobao sellers were urban dwellers because they had internet access and fairly educated. However, with internet penetration in the rural areas provided opportunity to the rural residents to become part of the network economy.

## NRSP Approach

This approach is well-grounded in the Civil Society Approach where three important stakeholders have been identified to carry out the development process efficiently and effectively. Three pillars of

society that is, political, administration and civil society (Village organizations) are interconnected to plan and develop the region. Diversity of opinions and their reconciliation is the major thrust of the approach and hence the participatory democracy principles are abided by.

The fundamental premise on which the rural support programs are based is the concept of *social mobilisation* is the underlying principle of the participatory NGOs and other Government sponsored organizations like SRPs. The idea emerged in Comilla, Bangladesh in 1960's and later employed in Saemul Dong Movement(Sourth Korea) and the AKRSP in Pakistan(Hussain, 2003).

So, the decision context becomes to evaluate options against list of criteria as shown in Table 1. The matrix cell represents the transformation of attribute into expression on any option.

Table 1: Options vs. Attribute

Options \ Criteria	(1) Social Cohesion	(2) Governance Mechanism	(3) Agriculture productivity	(4) Non-Agriculture	(5) Access to services	(6) Markets Development
Innovation & Technology based approaches (a)	$x_1^a$	$x_2^a$	$x_3^a$	$x_4^a$	$x_5^a$	$x_6^a$
Industrial districts (b)		$x_2^b$	$x_3^b$	$x_4^b$	$x_5^b$	$x_6^b$
APL approach (c)			$x_3^c$	$x_4^c$	$x_5^c$	$x_6^c$
Taobao villages (d)				$x_4^d$	$x_5^d$	$x_6^d$
TVEs (e)					$x_5^e$	$x_6^e$
NRSPs (f)						$x_6^f$

Where  $x_{criterion}^{option}$  represents ordinal score (value function) of criteria.

To obtain the  $x_{criterion}^{option}$  the partial scores of each criterion in an option we first built the Rural Development Models in MACBETH software as shown in Figure 4

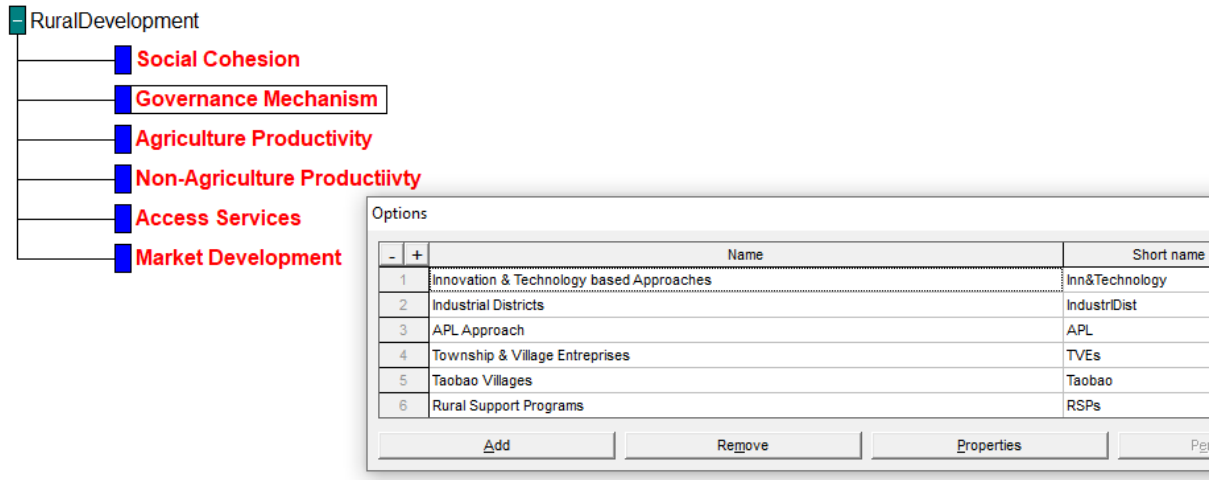


Figure 4: Rural Development Models Evaluation in MACBETH

In the next stage, preference modeling and strength of preference modeling is performed. By preference modeling we mean ranking of the options in the order of priority for each criterion. For instance, on the *social cohesion* criterion, the options are ranked as follows

$$Social\ Cohesion \Rightarrow RSPs > TVEs > APL > Taobao > Industrial\ Districts > Innov.\ \&\ Tech\ Approach$$

It means that social cohesion concept as an ingredient of rural development is better rooted in the RSPs, followed by TVEs and APL so on and so forth.

In the following stage, strength of preferences is determined. For the same *Social Cohesion*. The strength of preference is as follows

$$Social\ Cohesion \Rightarrow RSPs >^1 TVEs >^3 APL >^3 Taobao >^5 Industrial\ Districts >^6 Innov.\ \&\ Tech\ Approach$$

The strength of preferences suggest that RSP is weakly preferable over TVEs in terms of social cohesion which means that the difference in preference is weak and both approaches rely on social mobilization to development; yet RSP is preferable over TVEs by margin of (7.69), a score obtained when transforming the model into numerical scale.

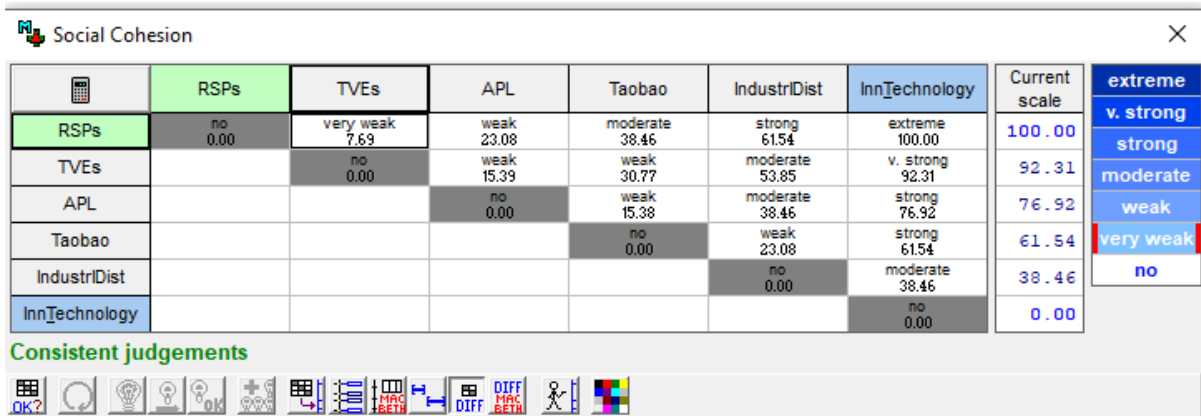


Figure 5: Options Scores' on Social Cohesion

By the same manner, the scores for other options in the remaining criteria are obtained.

In the next step, weights are determined for criteria. An expert opinion is solicited from the group members deciding on the importance of individual criterion and its role in the rural development. To this end, criteria are first ranked and pairwise comparison was made. The result of the comparison and the corresponding scores obtained are shown in Figure 6.

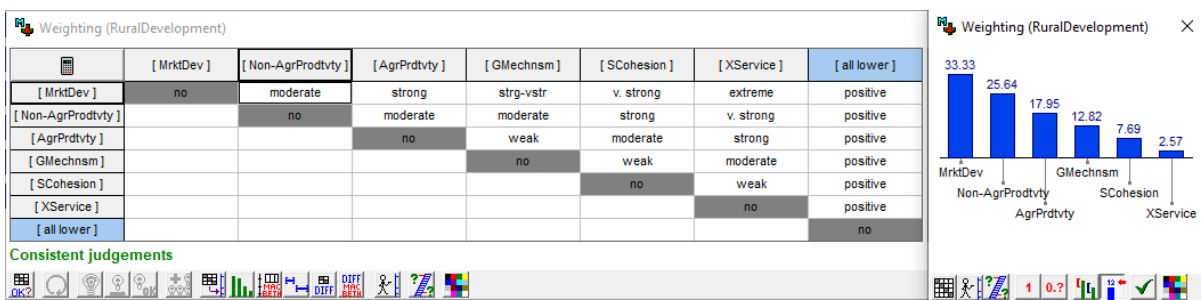


Figure 6: Weight Determination

Once the partial scores of each option along with weights for criteria are determined, in the next step, aggregation is performed using Equation ( ).

The aggregated score of each option and their ranking is computed as presented in Table 2.

Table 2: Aggregated scores of options

Options	Overall	SCohesion	GMechnsm	AgrPrdtvty	Non-AgrPrdtvty	XService	MrktDev
InnTechnology	29.98	0.00	0.00	0.00	76.92	0.00	30.77
IndustrIDist	63.90	38.46	33.33	25.00	100.00	35.29	76.92
APL	51.82	76.92	55.56	100.00	15.38	58.82	46.15
TVEs	64.11	92.31	100.00	81.25	30.77	47.06	61.54
Taobao	71.72	61.54	44.44	68.75	53.85	70.59	100.00
RSPs	27.67	100.00	83.33	37.50	0.00	100.00	0.00
[ all upper ]	100.00	100.00	100.00	100.00	100.00	100.00	100.00
[ all lower ]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weights :		0.0769	0.1282	0.1795	0.2564	0.0257	0.3333

From the table it is evident that Taobao ranked first in the rural development approaches followed by TVEs, Industrial Districts, APL, Innovation & Technology approach and RSPS.

## Results and Discussion

The application of MACBETH methodology to evaluate the selected rural development approaches based on criteria provided interesting results in terms of assessing the potentials of the approaches for rural development in Pakistan. Moreover, experts emphasized one criterion over other when it comes to transforming rural economy.

For instance, criterion of Market Development has been weighted heavily with a score of 0.333 followed by Non-Agriculture activities generation (0.256), Agriculture productivity enhancement (0.197), Governance mechanism (0.128), Social cohesion (0.077) and Access to service end up at the bottom with a score of 0.025. The highest score given to markets development and value chains is evident in the current context as the old recipes of relying on agriculture output to enhance livelihood and develop rural setting is largely criticized. Mitchell et al. (2014) in the book "Markets and Rural Poverty: Upgrading in Value Chains" emphasize on the role of markets development through value chains and advocate that the rural poor should upgrade their position in the natural resource-based value chains to enhance income and livelihood. In the same study, the authors also suggest focusing more on local value chains and markets first to overcome the difficulty of certification and compliance issues prevalent in the global value chains. Also, lack of properly functioning markets may result in inefficiency in agriculture marketing and agribusinesses who heavily rely on rural produces.

The Taobao Village scored high on the Markets development criterion because the model connects digitally consumer with producer and minimizes the role of the middlemen. Some villages on peripheries of agglomerations have better connection with latter; but also, with the international market. For instance, Taobao Villages sell products to Russian Federation, United States, France, Brazil etc (Ali Research 2017).

In the non-agriculture activities generation is ranked second on the importance scale for rural development. In many countries, large industries moved to peri-urban and rural setting to benefit from low cost inputs; however, most of the experiments failed particularly in Europe. Now the rural development experts suggest activities in other sectors such mining, manufacturing (cottage industry) and construction. The activities have further moved to tertiary sector such as transport, trading and public services. The due share of these activities in rural setting is unknown at least to the author but these are keep growing because modernization and mechanization of agriculture has created surplus labor, moving away from agriculture for many reasons including but not limited to minimize the risk of relying solely on agriculture product which is subject to changing weather patterns and other disasters such as locust attack in the case of Pakistan this year. Taobao villages, TVEs in China and APLs in Brazil primarily focus on non-farm activities to leverage rural development. For instance, of 134 APLs in Sao Paulo region in Brazil, only 43 are agriculture-based enterprises.

As for the Agriculture productivity enhancement (0.197), it is the focus of many rural programs as agriculture development was once synonymous to rural development. It still remains relevant but its extent to rural development is in decline in many rural settings across the globe. However, agriculture productivity is being enhanced in conjunction with other activities such as rural connectivity with urban centers, preservation and produce shelf life improvement etc. in order to provide decent livelihood to rural communities. Diversification of agriculture produces, and food

processing industries are other initiatives in the modern-day rural development through agriculture productivity enhancement initiatives. The Agriculture productivity enhancement scored 100 in APLs (as a reference point) followed by TVEs (81), Taobao (68), and RSPs (37). The reason is evident as mostly rural areas are rich in agriculture endowments and moving briskly away from the sector has been warned by development agencies including World Bank.

Other attributes that scored relatively insignificant in rural economic transformation are Access to services (0.025), Social Cohesion (0.079) and Governance mechanism (0.12). Focusing on providing services such as fresh water supply schemes, health facilities, education programs etc. though important for rural uplift; however, these have contributed in terms of economic activities generation. Same is the case with Social Cohesion as society mobilization to better cooperate with each other may bring some efficiency in the rural economic system but alone these characteristics are not sufficed. Similarly, Governance mechanism which involves the decision-making process at the gross root level may result in better executing an intervention; however, modern day markets are complex, dynamics and highly volatile. Lack of sufficient education and exposure to international markets for rural community put them at disadvantage despite the good governance mechanism and gross root level participation in the development process.

In the options, Innovation and Technology based approach scored low because that require highly skilled human resource which are not in abundance in the rural areas. Moreover, lack of sufficient infrastructure both logistics and allied services also constraint the development of business in the rural areas. However, ICT technologies penetration in the rural areas can help facilitate the development through Innovation and Technology based approaches if the rural educated youth is incentivized to return to native villages to start initiatives in their respective rural areas.

In short, rural development through programs may include determinants as diverse as the individuals, the contents and the context. One worked well for one individual or community may not necessarily work elsewhere. The contents of the program and the context is important too. For instance, TVEs contributed in China till the year 2000 but declined afterwards because of lack of support from the Government but the same time, the supply chains evolved overtime putting them at disadvantage then. Moreover, Chinese enterprises in the urban areas required backward linkages to thrive from early 80's to early 2000, and the TVEs provided that support. With growing wages, lack of innovation and other factors stagnated the further growth of TVEs in China. However, the gap was filled by new platform of Taobao villages to provide better livelihood to the rural Chinese communities.

#### Policy Directions

The political and economic systems in which these programs contributed is different from Pakistan; however, policy lessons can be drawn from these programs while devising rural policy for Pakistan; for instance,

1. The Rural Support Programs initiated in Pakistan to help develop rural communities using participatory development approaches and social mobilization concept have not produced the desired results. Because if one compares these programs with other initiatives across globe particularly the ones which were discussed in the current study, one sees a striking contrast in the development approaches. Elsewhere in China or APL in Brazil, the focus is on economic uplift of the rural areas with innovative strategies such as specialization and

cluster formation to help facilitate people to share knowledges and develop products and innovate products to stay relevant in the market, but in the RSPs the focus still remains on forming organizations at different tiers how to execute a project. Providing loans to communities for agriculture and livestock rearing and above all insufficient loan to meet their requirements have further questioned the credibility and effectiveness of the RSPs. So, lesson # 1 may be to focus on economic activities generation through innovation culture to stay competitive and relevant in the market.

2. Agglomeration and/or cluster formation is another key feature of the successful rural programs. Because in the cluster formation spillover of know how and technology happens that ensure the sustainability of the clusters. The success of TVEs can be attributed to a critical mass of enterprises in a locality. Even in Taobao Villages, there is a requirement of minimum 50 companies or 10% households to be declared Taobao village. Similarly, clustering is key in APL and other rural programs. In Pakistan, policy should be devised to form and declare a cluster in rural settings and then support its development through incentives and other support measures.
3. Supply chains and value chains are mandatory. Any business will be placed somewhere on a supply chain but the effectiveness and efficiency of the supply chains and value chains for businesses to thrive. Taobao and TVEs if achieved milestone is because of their efficient supply chains. Companies and individuals shy away from unreliable suppliers and don't become part of uncertain supply chains. Closely associated with supply chains are markets development and public support is required to do so.
4. Competencies and capacities of rural residents should be improved to meet the demand of the competitive market. Training in digital technologies, marketing, accounting and operation management could be some of the areas to focus on.
5. Digitization of rural areas is needed, and digital rural strategy should be devised to support the economic growth. Freelancing on digital platform unleashes immense opportunities to educated rural youths. However, lack of digital infrastructure or poor infrastructure constrained the exploitation of e-businesses to the full potential.
6. Social mobilization concept largely been used in participatory development approaches should be strengthened. Village committees, (e)-commerce associations, financial institutions and other public offices should be well-coordinated to create a cordial environment for businesses in the rural areas. Taobao villages, though run their businesses through digital platform but coordination is maintained among various stakeholders for better business ecosystem. Moreover, the business ecosystem in rural areas would monitor fair competition, encourage quality products development and discourage low degree of product differentiation.
7. Lastly, linkages with research institutes and universities should be established to provide enterprises in the rural areas know how of the trends in the emerging market scenarios. Market intelligence is key to business development but small and medium enterprises and that too in the rural setting would not be able to grasp the changing scenarios in the market too quickly. Universities and downstream entities in the supply chains can help the upstream



enterprises to timely upgrade and innovate to better serve their respective markets and stay relevant.

## Conclusion

In the current study, rural transformation and rural development has been explored in order to provide policy directions for rural policy development in Pakistan. To this end, different rural programs implemented around the world were studied to identify their pros and cons. Notable rural programs in China, for instance, Township and Village Enterprises and the newly digital platform in rural China called Taobao Villages in addition to APL program in China also came under investigation. Much touted rural programs called Rural Support Programs in Pakistan were also studied to determine its scale and scope and contribution in the rural development. In addition to these programs, one approach which is being tested in the rural setting is the innovation and technology-based approach is also included in the scope of the study to see if it is relevant in the rural development.

To evaluate the strengths and weaknesses of these programs, multi attribute decision making approach called MACBETH is applied. But before the evaluation, list of attributes was identified deemed necessary for any rural program success. Among the attributes are social cohesion, governance mechanism, agriculture productivity enhancement, non-agriculture activities, access to services and markets and value chains development.

The five options are then evaluated against the identified criteria and it was found that Taobao ranked first followed by TVEs, Industrial Districts, APLs, RSPS and Innovation & Technology based approaches. Moreover, attributes such as market development was given more weightage followed by non-agriculture activities, agriculture productivity enhancement, governance mechanism, access to service and social cohesion. It is pertinent to mention here that weightage is subjective and reflect the importance of determinants required for rural development in the mind of the decision makers or expert groups.

From the evaluation, it can be concluded that not all programs ranked high on every attribute; however, some programs (options) scored high on certain attributes high making the option more relevant for rural development in the current scenario. Taobao village if ranked high certainly has the characteristics of any good rural development program. It emphasizes on market development and value chain in addition to emphasizing on economic activities both agriculture and non-agriculture to promote business in a village. It also gives due importance to the social cohesion and other determinants of success.

Should Taobao village concept be implemented in Pakistan then? The Author suggest no copy-paste approach; however, draws lessons from all the approaches and suggest some policy recommendations for rural policy development in Pakistan.

Recommendations for rural development in Pakistan include but not limited to focusing on economic activities and value addition in the local community instead of simply relying on providing loans to rear livestock or purchasing inputs in the form of seeds and fertilizers for agriculture production. Adding value to the resources and developing products for the markets both local and international should be the focus of the new rural development policy. Trainings and improving the competencies of the rural youth, incentivizing educated rural youth to stay in their respective areas for promoting entrepreneurship, provision of sufficient digital and transport infrastructure, supply

chain development and upgradation in the value chains through innovation are among the recommendations for rural uplift.

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