

## Why Social Innovations Struggle to Achieve Sustainability and Systemic Change? Actors' Role Using Murray's Framework

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### Abstract

*This research focuses on generating an in-depth understanding of social innovation process with respect to actors and why these innovations struggle to achieve sustainability and systemic change. Ever since the seminal work on social innovation as a process by Murray, Caulier-Grice and Mulgan back in 2010, numerous studies have attempted to explain it. However, the role of actors in this process and linking this with possible reasons for lack of sustainability and systemic change as an outcome of the social innovation process has remained underexplored. This study is empirically rooted in public sector of Khyber Pakhtunkhwa (KP) Pakistan. Taking influence from a qualitative case study strategy, a multiple case and holistic design has been used, where three separate but relevant social innovation projects have been selected as cases. Findings reveal that different actors facilitated the process in prompts, inspiration and diagnosis, proposal of ideas, prototyping and pilot testing, sustaining and scaling and diffusion through a complex interplay of factors. However, it is a lack of actors' acceptance, ownership and willingness to continue social innovations that results in failing to achieve the sustainability and ultimate outcomes of systemic change. This research offers additional theoretical, methodological and empirical contributions along with recommendations.*

**Keywords:** Social Innovation, Social Innovation Process, Firms, Non-firms, and Individual Actors.

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### Introduction

The field of social innovation (SI) has received enormous attention in scholarly, policy and public debates (El-Haddadeh, Irani, Millard, & Schröder, 2014). There is a growing consensus among practitioners, policy makers, the research community, and others that widespread social innovation is required to cope with the significant challenges that societies face. It seems to be a useful approach from public sector reform perspective as reforms are done through social innovation projects/ initiatives (Bekkers, Tummers, Stuijzand, & Voorberg, 2013; Bekkers & Tummers, 2017). Moreover, the stages of social innovation

process serve as a useful analytical framework that provides a significant tool for policy makers, practitioners and innovators for considering various activities that occur and the needed resources and support in all stages of the process (Caulier-Grice, Davies, Patrick, & Norman, 2012; Howaldt, Butzin, Domanski, & Kaletka, 2014). However, there is a gap in research on social innovation in public sectors of developing countries, where such studies can reveal more evidence on social innovations in public sector organizations (Rana, Weerakkody, Dwivedi, & Piercy, 2014). Moreover, social innovation projects are poorly understood in practice (Hernandez & Cormican, 2016), and there is insufficient research on the factors that facilitate or hinder social innovation process (Lettice & Parekh, 2010; Nicolopoulou, Karatas, Özkan, Vas, & Nouman, 2015). Future research should study the factors influencing social innovation (Neumeier, 2016). Specifically, there is a need to investigate actors and their role in promoting or hindering process of social innovation (Krev, Bund, & Mildemberger, 2014; Turker & Vural, 2017; Von Jacobi, Nicholls, & Chiappero-Martinetti, 2017). Accordingly, this research exhibits novelty by addressing these gaps and investigating the existence and influence of institutions in social innovation process stages of public sector of developing country, Pakistan.

## Review of Literature

### The Emergence of Social Innovation Concept in Innovation Studies

The concept of innovation has gained attention and desirability since much than a century (Krev et al., 2014). It is generally described as ‘new ideas that work’ (Mulgan, Tucker, Ali, & Sanders, 2007), and more specifically as “the process of making changes, large and small, radical and incremental, to products, processes, and services that results in something new for the organization that adds value to customers” (O’Sullivan & Dooley, 2008, p.5). The innovation studies and the innovation theory have a long history, and find their systematic beginnings and reference in the work of Schumpeter, which is valid to this day (El-Haddadeh et al., 2014; Howaldt et al., 2014; Van der Have & Rubalcaba, 2016). The focus and concern of scientific field of innovation studies has been changing in different time periods. Recently, the field of innovation studies has started giving increased attention to social innovation concept (Martin, 2013). Its emergence in innovation studies is shown in table 1.

Table 1: Emergence of Social Innovation Concept in Innovation Studies

Time Period	Focus in Innovation Studies
Late 19 <sup>th</sup> - early 20 <sup>th</sup> Century	The emphasis was on technological innovations in different forms and their impacts on economic productivity
Late 20 <sup>th</sup> Century (1990-2000)	Increasing concern for negative social effects of economic growth, and innovation towards sustainability issues
Early 21 <sup>st</sup> Century (2001)	Focus on social innovation as problem solving mechanism to tackle the societal challenges and social problems.

The fundamental changes of twenty-first century have taken place in the society, and led to complex and serious social problems, emphasizing the role of innovation to tackle the societal challenges (Borzaga & Bodini, 2014; Howaldt et al., 2014). Innovation that can solve societal problems and meet the diverse and growing needs, and create value for society is described as social innovation (Ayob, Teasdale, & Fagan, 2016; Benneworth, Amanatidou, Edwards-Schachter, & Gulbrandsen, 2015; Edler & Fagerberg, 2017).

However, social innovation has been an underdeveloped area in innovation studies (Cunha, Benneworth, & Oliveira, 2015; Krev et al., 2014; Marques, Morgan, & Richardson, 2017). Innovation studies emphasize the importance of how innovation occurs that is, process of innovation (Benneworth et al., 2015; Fagerberg, Martin, & Andersen 2013). Accordingly, the integration of social innovation in innovation studies can be enabled by the overlapping theme (Marques et al., 2017) of social innovation process, which also considers on how social innovation occurs. However, there is insufficient research on the process of social innovation, hindering the practice (Cunha & Benneworth, 2013; Lettice & Parekh, 2010). Future research

needs to examine social innovation process empirically (Borzaga & Bodini, 2014; Nicolopoulou et al., 2015). Thus, how social innovation occurs that is, the process of social innovation is discussed as follows:

**Studying Social Innovation: The Need to Consider Social Innovation Process**

The process of social innovation explains how it occurs and needs to be studied to suggest the practical ways of designing, developing and growing social innovation (Choi & Majumdar, 2015; Santos, Salvado, de Carvalho, & Schulte, 2013). This is in line with innovation studies literature that considers innovation process as analytical model (Godin, 2015; Meissner & Kotsemir, 2016). Similarly, the stages of social innovation process serve as a useful analytical framework that provides a significant tool for policy makers, practitioners and innovators for considering various activities that occur and the needed resources and support in all stages of the process (Caulier-Grice et al., 2012; Howaldt et al., 2014). Thus, we need to understand how social innovations occur, are designed, developed, diffused and so on (Choi & Majumdar, 2015). Mulgan (2006) along with others (Mulgan et al., 2007), and Murray et al. (2010) propose social innovations process (see table 2). However, Murray et al. (2010) provide more comprehensive process (Caulier-Grice et al., 2012), identified from the literature and the practice, and by the study of methods used for social innovation worldwide (Murray et al., 2010). It is discussed/used by other researchers such as Bund, Hubrich, Schmitz, Mildenerger and Krlev (2013), Caulier-Grice et al. (2012), Cunha and Benneworth (2013), Howaldt et al. (2014), Krlev et al. (2014), Massey and Johnston-Miller(2016), and Santos et al. (2013) to understand social innovation. Moreover, these stages are important in public sector as well as private sector context (Murray et al., 2010). Therefore, this study considers the social innovation process proposed by Murray et al. (2010), for studying social innovation

Table 2. Stages of Social Innovation Process and their Sources

Stages of Social Innovation Process	Source
SI process consists of four stages:	Mulgan (2006)
1) Idea Generation	Mulgan et al. (2007)
2) Idea Implementation	
3) Scaling Up and Diffusion	
4) Learning and Evolving	
SI process consists of six stages:	Murray et al. (2010)
1) Prompts, Inspiration and Diagnosis: problem identification	
2) Proposal of Ideas: idea generation	
3) Prototyping and Pilot Testing: idea implementation	
4) Sustaining: idea becomes everyday practice	
5) Scaling and Diffusion: growth & adaptation of SI	
6) Systemic Change: changes in thinking, perceptions and way things are done	

The social innovation process model proposed by Murray et al. (2010) is diagrammatically shown in Figure 1 below:

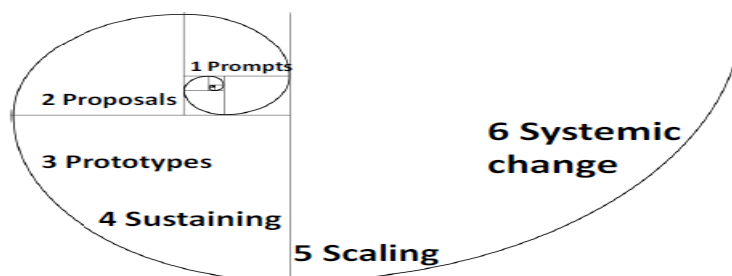


Figure 1: Process of Social Innovation Adopted from Murray et al. (2010)

However, the complexity of innovation cannot be reduced to innovation process stages, and is determined by factors (Howaldt et al., 2014; Meissner & Kotsemir, 2016). As, the factors explain success or failure of innovation process. That is, they influence (trigger or constraint) the innovation process as drivers and barriers respectively, and are emphasized in innovation studies (Bekkers et al., 2013; Hekkert & Negro, 2008). Similarly, the complex, iterative and interactive process of social innovation is influenced by different factors, corresponding to the understanding of innovation process in innovation studies (Krlev et al., 2014; Rao-Nicholson, Vorley, & Khan, 2017). Among different important factors, role of actors' in social innovation has been emphasized by several previous studies (such as Bekkers et al., 2013; Cajaiba-Santana, 2014; Krlev et al., 2014; Phillips, Lee, Ghobadian, O'Regan, & James, 2014; Turker & Vural, 2017; Von Jacobi et al., 2017). The role of actors is discussed as follows:

### **Role of Actors in Sectoral System in influencing Social Innovation Process**

There is wide variety of actors in a sectoral innovation system (Adams, Brusoni, & Malerba, 2011; Malerba, 2002, 2005) as well as social innovation (Rana et al., 2014). Actors influence/facilitate social innovation process (Krlev et al., 2014; Mulgan et al., 2007; Turker & Vural, 2017). The importance and the role of different actors in innovation differ in different sectors (Markard & Truffer, 2008). In sectoral innovation system and social innovation, actors include individuals such as innovators, entrepreneurs, consumers, politicians, scientists, citizens, as well as organizations/firms, non-government organizations, not-for-profit organizations, government, government agencies of various layers, civil society, volunteers (Osburg & Schmidpeter, 2013; Rana et al., 2014). This shows that actors may be considered at lower or higher levels of aggregation compared to firms where individuals represent micro-level conceptualization (Malerba, 2002, 2005).

In sectoral system of innovation literature, organization is given importance whereas individuals have received far less attention (Markard & Truffer, 2008). However, individuals can be key players in sectoral systems (Malerba, 2002, 2005). On the other hand, in social innovation literature, individuals are discussed more as compared to organizations. Although individuals are important in social innovation, yet lone individuals do not take social innovation in isolation (Daily, 2014; Phillips et al., 2014). Individuals have some limitations with respect to ideas, managerial skills, and resources, and should develop relationship with other organizations, stakeholders to bring social innovation (Tanimoto, 2012). Social innovations require the active participation of multiple actors and are influenced by wide variety of organizations, stakeholders (Cajaiba-Santana, 2014; Phillips et al., 2014; Tanimoto, 2012). Therefore, the individualist approach is insufficient to account for the dynamics of social innovation (Cajaiba-Santana, 2014), and examining the role of organizations is essential in understanding how social innovation occurs (Daily, 2014). This shows, it is important to consider both individuals and organizations as actors influencing sectoral system of social innovation.

Moreover, Organizations are described as;

*“Formal structures with an explicit purpose and they are consciously created.”* (Edquist & Johnson, 1997, p.47)

Organizations include firms and non-firms in a sectoral system of innovation (Edquist & Johnson, 1997; Malerba, 2002). Innovation processes are located in firm. Firms are primary actors who influence innovation process directly, carry out the core innovation activities, design, develop and build, such as suppliers, producers, users and so on. Non-firms are secondary actors, more indirectly involved in innovation process. They provide the supporting role with respect to regulations, knowledge diffusion, counseling, or financial support, such as government organizations, universities, financial institutions, research centers and so on (Adams et al., 2011; Jenson, Leith, Doyle, West, & Miles, 2016; Malerba, 2005).

Actors are characterized by specific mandates, objectives, goals, beliefs, experiences, expertise, knowledge, learning, organizational structures, behaviors, resources and competencies (Malerba, 2002). Social innovation actors are also considered to be purposeful, knowledgeable, reflexive and heterogeneous (Cajaiba-Santana, 2014). The differential capabilities, beliefs, competencies, behaviors and so on, indicate firms' heterogeneity. Firms' heterogeneity is a key feature of sectoral system, and different sectors are different in the extent and kinds of firms' heterogeneity (Malerba, 2005). However, actors in a sectoral innovation system may share some specific knowledge areas, technologies, needs and demands (Chan & Daim, 2012). Moreover, firms have different competitiveness based on their different competencies and knowledge (Malerba, 2002).

Actors play a significant role in innovation system as they are involved in the generation, diffusion and utilization of the innovation (Adams et al., 2011; Malerba, 2002). These actors conduct a wide variety of innovation activities such as experimentation, research and development, capacity building, market analysis, field-testing, collaborations, management of networks, and so on. These innovation activities further contribute to innovation system functioning (Markard & Truffer, 2008). Moreover, entrepreneurial activities of actors are regarded as one of the key functions that trigger many other functions of innovation system. There is no such thing as innovation and an innovation system without entrepreneurial activities. Since innovation is intrinsically related with entrepreneurship as both incorporate processes of opportunities recognition and exploitation, novelties, evaluation and so on. In the innovation literature, entrepreneurial activities are considered from individual perspective, particularly that of the entrepreneur(s), who are prime indication for innovation system's performance. The role performed by entrepreneur is important in initializing and crystallizing the sectoral innovation system as well (Hekkert & Negro, 2008). Similarly, social innovators share commonalities with entrepreneurs and face many problems that are also faced by entrepreneurs (Lettice & Parekh, 2010). Krlev et al. (2014) assert that entrepreneurial activities of individuals as well as of organizations are vital in triggering social innovations. These entrepreneurial activities include elements of knowledge creation, experimentation, learning processes, idea generation, idea selection, idea implementation, and resources mobilization, along with risk taking (Hekkert & Negro, 2008; Krlev et al., 2014). Previous studies demonstrate that skills of opportunity recognition, understanding societal need/problem and designing workable/ novel solution, resources mobilization and increasing the credibility and effectiveness of social innovations, are significant in social innovation (Osburg & Schmidpeter, 2013). Moreover, these entrepreneurial activities contribute to innovation performance, and comply with of stages of social innovation process proposed by Murray et al. (2010). Such as, idea generation is vital in proposals of idea stage, idea selection and implementation in prototyping stage, and resources mobilization in sustaining stage and so on (Krlev et al., 2014).

## Research Methodology

This study applies multiple cases and holistic case study design on the three social innovation projects in KP, Pakistan. These include Independent Monitoring Unit (IMU), Sehat Ka Insaf (SKI) and Mobile Court (MC). For the purpose of this qualitative study, the data have been collected through semi-structured interviews from 24 interviewees. The sample has been drawn through heterogeneous/ maximum variation, purposive sampling. The interviewees belonged to key stakeholders, occupying supervisory positions in the respective projects such as Project Director/Manager, Deputy Director, Monitoring & Evaluation Specialist and so on. The interviews duration ranged from 30 minutes to 2 hours. An interview protocol has been designed as per the procedural model (from general to specific questions) allowing flexibility in probing (Krueger & Casey, 2000; Rubin & Rubin, 2005). The interview protocol has been pre-tested with one of the interviewees from each case, making modifications and incorporating suggestions.

The data have been systematically analyzed by qualitative analysis framework (King, 2004). The framework has taken influence from Miles, Huberman, and Saldaña (2014) with respect to steps in qualitative analysis, and Saldaña (2013) for cycles of coding. Among the analysis steps, three core

activities have been applied: data condensation- coding, data displays- network, and drawing and verifying conclusions (Miles et al., 2014), see table 3.

Table 3: Link of Research Objective and Question with Data Collection and Data Analysis Techniques

Research Objective	Research Question	Data Collection Method	Data Analysis Techniques
RO1) To examine the influence of actors on social innovation process in the public sector	RQ1) How are the actors placed with respect to social innovation process?	Semi-Structured Interviews	First Cycle of Coding: <input type="checkbox"/> Star-List Of Codes <input type="checkbox"/> In-Vivo Coding Second Cycle of Coding: <input type="checkbox"/> Pattern Coding Data Display: Role-Ordered Matrix

## Data Analysis and Results

This section analyses and addresses research objective and the related research question regarding the role of actors in different stages of social innovation process in public sector context.

### Stages of Social Innovation Process

The process of social innovation consists of prompts, inspiration and diagnosis, proposals of ideas, prototyping and pilots, scaling and diffusion, and systemic change stage, discussed below:

### Prompts, Inspirations and Diagnoses

This stage is about identification of problem, its triggers, causes, consequences, and need for social innovation (Mulgan, 2006; Mulgan et al., 2007; Murray et al., 2010). In case of IMU, the performance of government schools in KP was not good, despite the resources allocations and funding. There was provision of low quality education to the children, whereas most of children were deprived of education, and there was high teacher and student absenteeism, ghost teachers, students' dropouts, and non-functional schools. Different surveys and studies were conducted on the education sector performance in KP and identified that the problem was ineffective and inefficient monitoring system used by elementary and secondary education department, KP. In case of SKI, Peshawar, KP, was declared as hub of poliovirus, from where virus was spreading to whole Pakistan and to the world. The outbreak of polio cases reflected the emergency in Peshawar. This humanitarian crisis indicated the problem of operational failure of polio program. That is, the implementation and monitoring of polio program was not carried properly in Peshawar. This problem was obvious since most of the polio workers and monitors refused to work, and those working gave poor service delivery and poor campaign performance, such as not meeting targets, missing children and so on. The problem was caused by lack of conducive environment for polio program that consisted of number of factors. In case of MC, there was inadequate provision of justice service delivery to the public in KP as justice was delayed, inaccessible, and expensive. This was because of the problem of ineffective and inefficient formal justice system (KP). This problem is a general issue and established fact in Pakistan and some other countries, and is obvious as PHC has data on pendency of cases. The problem was caused by a number of factors which were interlinked.

### Proposals of Ideas

In all the three cases, idea of social innovation was generated regarding what could solve the problem and overcome its causes. The idea was in terms of monitoring system in IMU, health package in SKI, and informal justice system in MC. The sources of the respective ideas were other regions (national/international) where systems/models were working to overcome somewhat similar problem. The method

for drawing insights and experiences from these sources included adaptation of the respective models according to respective contexts of all the three cases (Caulier-Grice et al., 2012; Murray et al., 2010). The idea was planned, presented, and approved in terms of PC-1 (Planning Commission Form-1) in IMU, co-designed, presented and formally approved in SKI, and developed in form of a detailed report, which was submitted, and approved in terms of PC-1.

### **Prototyping and Pilots**

In all the three cases, the idea was implemented formally by pilot testing, and also developing prototype in MC. This stage incorporated arrangements made before launching the respective projects and implementation of the project activities as planned. Moreover, in IMU and SKI adjustments were made for unplanned issues through feedback (Caulier-Grice et al., 2012; Mulgan et al., 2007; Murray et al., 2010) provided in monitoring and assessment meetings with those performing project activities. However, such meetings were not conducted in case of MC. Moreover, in IMU and SKI, there was sufficient time for project activities to be carried and demonstrate its benefits however, not in case of MC.

### **Sustaining**

In IMU, SKI, and MC, the sustainability was influenced by several factors. Such as: 1) lack of/cost-effectiveness of social innovation in meeting targets and goals than alternatives in all cases, 2) integration of social innovation into public policy or programme, providing funding/budget in IMU, or 3) public regulation attached to social innovation in MC (Caulier-Grice et al., 2012; Murray et al., 2010), 4) lack of/sufficient resources and financial sustainability in all cases, 5) lack of/ dedicated, separate and accountable HR in all cases, 6) demonstrates results/beneficial in IMU , 7) lack of/linkage to long-term objectives in IMU and SKI, 8) lack of/key stakeholders' acceptance, will and ownership in all cases, 9) lack of operational and administrative feasibility in SKI and MC, and 10) incompatibility with old system in MC. IMU is considered as sustainable as it is extended for 2 more years as well as expected to be regularized after extension, requiring Act and budget. SKI is not considered sustainable and accordingly neither integrated in public programme nor given regulation. It was ended after being carried for the planned duration due to lack of factors (discussed above) important for sustainability. Lastly, MC stopped functioning after prototyping and pilot testing stage. Although, a few important factors were present, yet MC project was not sustained due to lack of other important factors (discussed above).

### **Scaling and Diffusion**

In IMU and SKI and to some extent in MC, the scaling and diffusion that is, spread and growth of respective social innovations took place in other contexts such as regions and/or sectors through replication and adaptation, based on effective supply and effective demand (Caulier-Grice et al., 2012; Mulgan, 2006; Mulgan et al., 2007; Murray et al., 2010). The effective supply means respective social innovation was successful, easy to adapt, cost-effective and more feasible than alternative, whereas effective demand means relevant stakeholders were willing to replicate/adapt respective social innovation in other contexts to resolve similar problem. Moreover, SKI and the idea of MC was also extended through similar social innovations that incorporated their components, namely Sehat Ka Eittehad (SKE) carried in KP and FATA and Dispute Resolution Council (DRC) carried in KP's home department, respectively. Additionally, the scaling and diffusion of adapted social innovations (such as IMU Health, SKE and DRC) involved integration in public development programmes or/and legislation (Murray et al., 2010).

### **Systemic Change**

The ultimate goal of social innovation is to have positive impact on society and bring changes in the system that is, re-designing and establishing the new system where people think and see in new ways (Caulier-Grice et al., 2012; Murray et al., 2010). The systemic change of respective social innovations in each case

is explained as follows: IMU represented a reform in the education monitoring system of KP and established a new monitoring system that is totally different from old system, changed the perceptions and thinking of people, and exerted an impact on society’s well-being. SKI did not attain change in the system as a whole, yet it brought some changes in the working of conventional system and in perceptions of community, and exerted impact on society’s well-being. MC represented a revolutionary change in the scheme of law and was very different from formal system. Yet, it became non-functional, consequently, did not bring change in the working of the formal justice system and in the perceptions of people since it was carried for very short period and there was lack of awareness of all judicial staff and community as a whole. However, MC temporarily exerted impact on society till it was functional. In all the cases however, systemic change was not achieved fully. Moreover, social innovations are context bound. Similarly, IMU, SKI and MC were purely based on the circumstances and the context. That is, they were designed to overcome the problem and its causes specifically found in Peshawar or KP.

The explanation of the social innovation process in each case provided above is diagrammatically presented below in the form of networks specifically event-state networks (see figures 2).

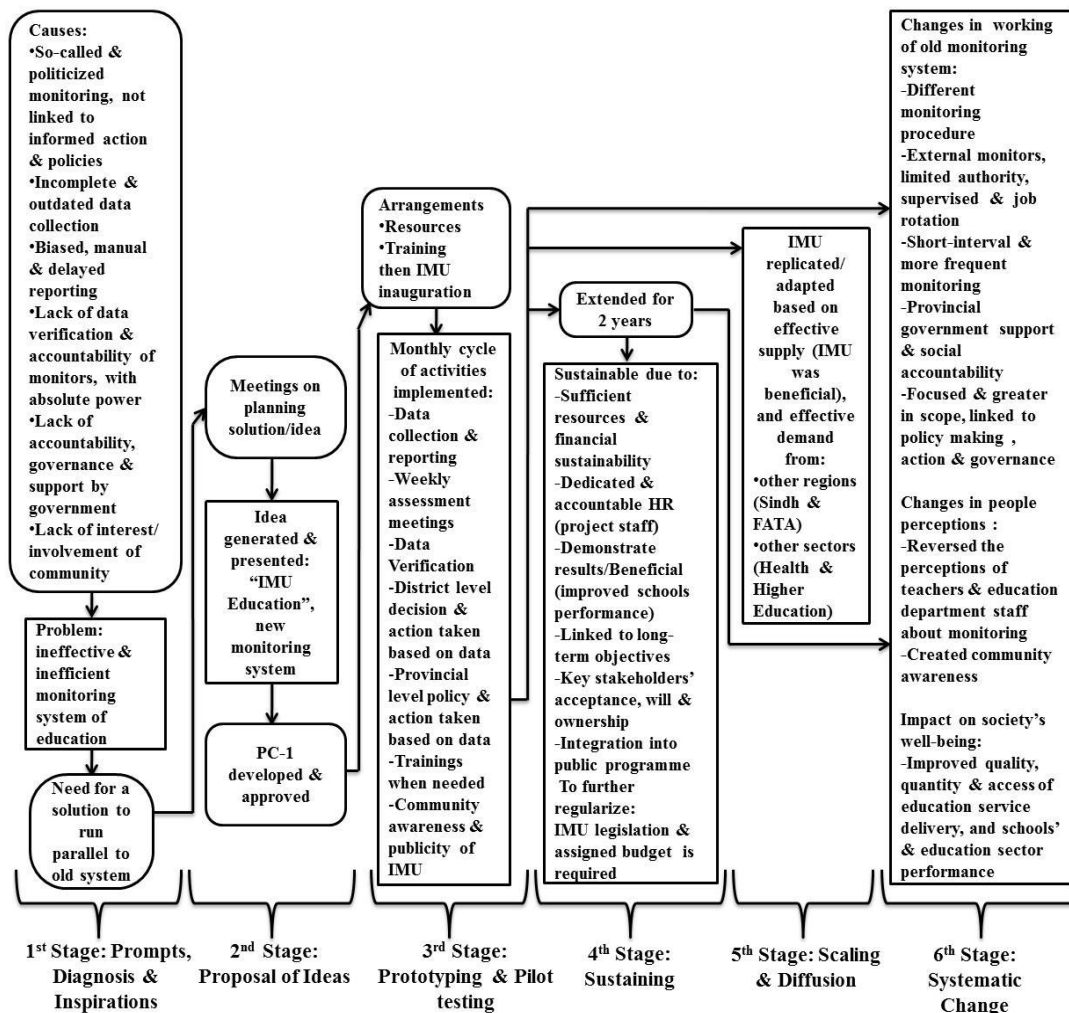


Figure 2: Event-State Network - Stages of Social Innovation Process in IMU

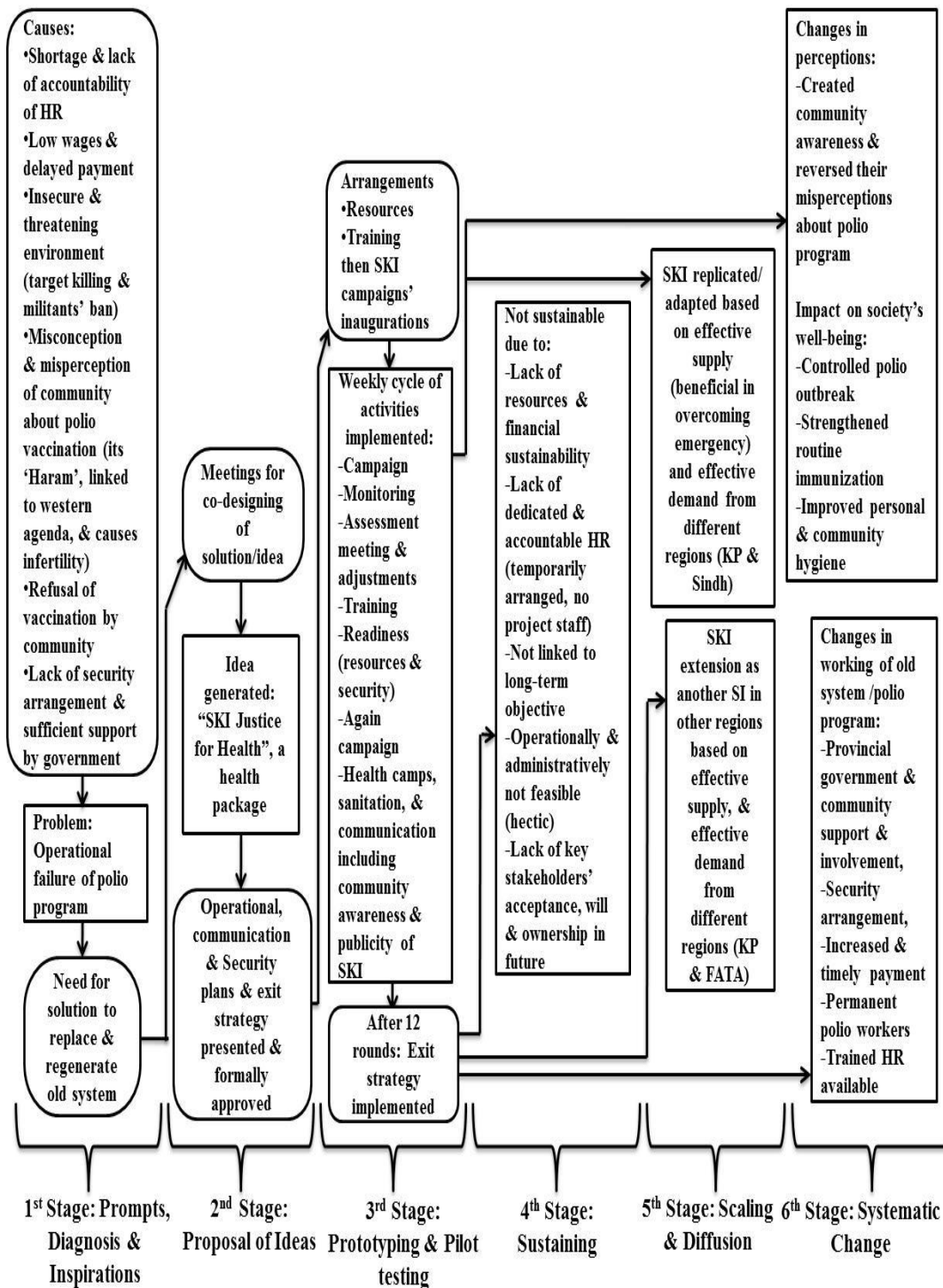


Figure 3. Event-State Network - Stages of Social Innovation Process in SKI

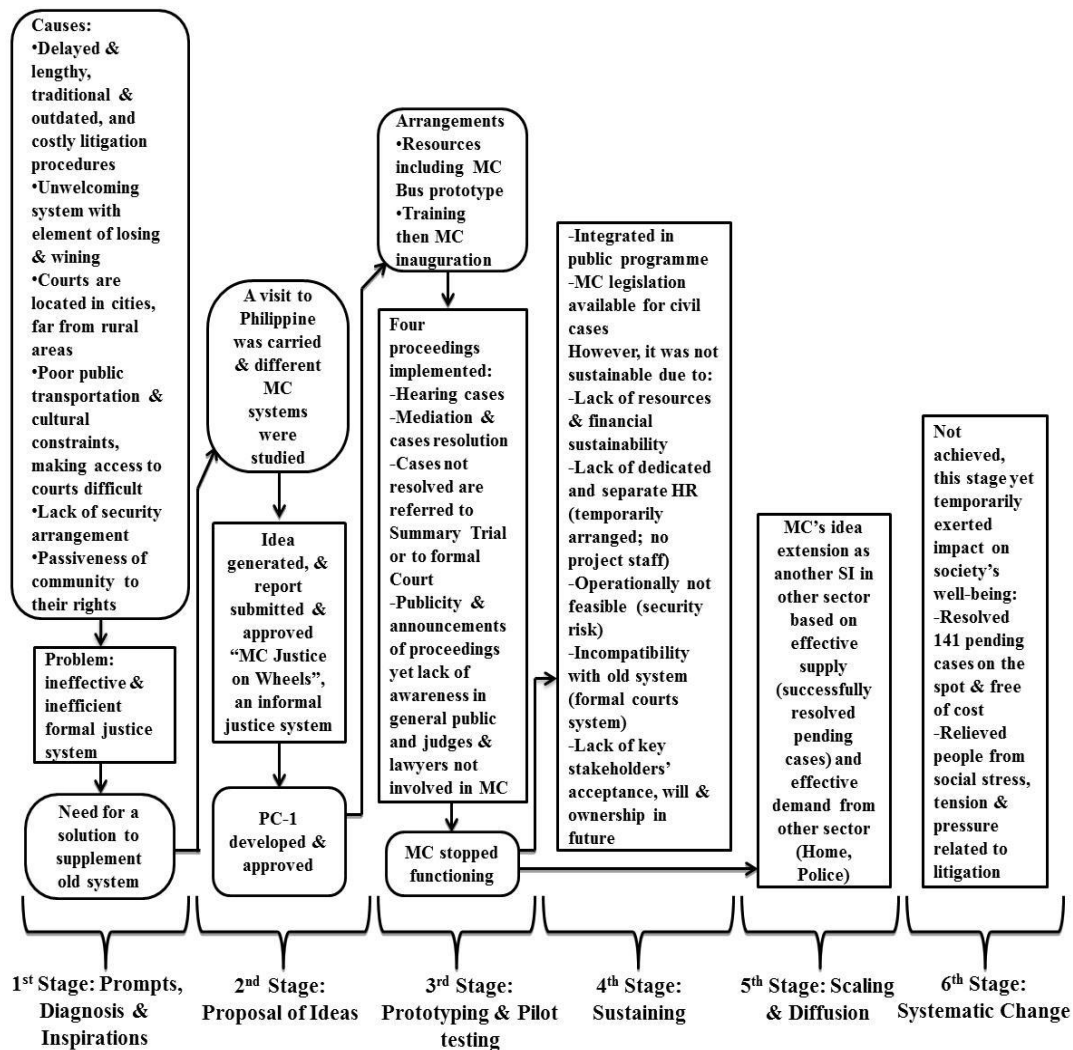


Figure 4 : Event-State Network - Stages of Social Innovation Process in MC

### Actors in Sectoral System with respect to Social Innovation Process

In all the three cases, heterogeneous actors such as organizations in the form of firms and non-firms, as well as individual actors played their role in influencing the social innovation process in sectoral system (Adams et al., 2011; Krlev et al., 2014; Phillips et al., 2014). These firms and non-firms had different mandates, resources and competencies, yet exhibited commonality (Chan & Daim, 2012; Malerba, 2002) related to education sector monitoring in IMU, related to polio program in SKI, and related to justice provision in MC. Moreover, these firms and non-firms constituted key stakeholders in respective cases such as parent department, government, donors and technical partners, and community, discussed below. In IMU, the firms included Education Department, Adam Smith International (ASI), and IMU, and the non-firms included Donor, Department for International Development (DFID), Provincial Government and its departments such as district administration, planning and development, finance, and other relevant departments, and vendor, and android firm Softorea. The individual actors from firms and non-firms included their representative heads, whereas the individual actor emphasized by interviewees was technical advisor, ASI.

In SKI, the firms included Health Department EPI (*Expanded Program on Immunization*) and NSTOP (National Stop Transmission of Polio), WHO and UNICEF, and the non-firms included Donors- Bill & Melinda Gates Foundation, Rotary International and Japan International Cooperation Agency, Political Party, Community, vendor, manufacturers Federal Government, Provincial Government and its departments such as district administration, education, police and other law enforcement agencies. The individual actors' from firms and non-firms included their representative heads, whereas the individual actor emphasized by interviewees was leader of political party.

In MC, the firms included PHC, D&SC, and KPJA. The non-firms included UNDP, bar association, Provincial Government and its departments such as police and DG (Director General) government buildings, and manufacturer. The individual actors' from firms and non-firms included their representative heads, whereas the individual actor emphasized by interviewees was Chief Justice, PHC.

In these cases, the firms are primary actors who carry the core innovation activities whereas, the non-firms are secondary actors who provide the supporting role with respect to regulations, knowledge diffusion, consultation, or financial support (Adams et al., 2011; Jenson et al., 2016). Moreover, the role of community/ users across three cases was different depending on the distribution superior knowledge regarding the problem and solution between user and producer, and legitimacy in social innovation (Svensson & Bengtsson, 2010). In IMU, community did not play any significant role and accordingly is not included as key actor in role-ordered matrix (table 4.1). As, IMU required professional competence in monitoring of education service delivery, the substantial knowledge of which was not available with community. However, the social accountability from community side was enhanced. In SKI, community played a significant role especially in implementation of social innovation. As community members giving polio vaccination are more legitimate for community than others, therefore gaining community acceptance for vaccination. In MC, community did not play any significant role and accordingly is not included as key actor in role-ordered matrix (table 4.3). However, it was intended to involve community elders as mediators in future operations due to their legitimacy in community and their experience of working in 'Jirga'.

The respective actors in all the cases played their role by carrying out entrepreneurial activities together (Hekkert & Negro, 2008), contributing to different stages of social innovation process. These entrepreneurial activities included problem identification, opportunity recognition, understanding societal need/problem, idea generation and designing workable/ novel solution, idea implementation, resources mobilization, research and development, capacity building, collaborations and so on (Krlev et al., 2014; Osburg & Schmidpeter, 2013).

In IMU, actors played significant role in facilitating all the stages of social innovation process, whereas in SKI actors played significant role in all the stages and to some extent systemic change, yet not in the fourth stage. In MC, actors played significant role in facilitating the first three stages only. However, they carried the third stage for a very short period, and did not carry the later stages due to lack of acceptance, ownership and willingness. The actors and their roles in each case are diagrammatically shown in table 4, 5, and 6, respectively. These tables only include those roles that occurred in two or more stages, to avoid overloading the matrix.

Table 4: Role-Ordered Matrix- Role of Actors within IMU

Actors	1. Prompts, Inspirations & Diagnoses	2. Proposals of Ideas	3. Prototyping & Pilots	4. Sustaining	5. Scaling & Diffusion	6. Systemic Change
Education Department (Edu Dept) is PG's depart that works to improve public edu sector performance	-did need assessment -officers had realization that KESP required innovative ideas	-agreed to have IMU -developed PC-I	-provided money & perf indicators -DE provided training on edu sector -DEO administers schools' administration, access data sent by DCMAs, is core member in DSCM & takes corrective actions -Sectary Edu or Edu Minister chairs PLM & make policy level decisions	-owned, & demanded IMU -decide IMU determined its need	NR	-continued its role and work, and supported IMU and brought reforms accordingly
DFID is UK Govt dept/ donor firm -funds ESRU of edu dept & hired ASI for technical assistance	-conducted studies on edu sector perf -told current situation of edu sector to PG	-suggested IMU to PG & Edu dept as solution -demanded IMU to get real time data for accurate actions -arranged ASI support for IMU	-funded IMU NR implementation for initial two years	NR	NR	-continued its role and supported IMU
ASI is technical advisor working on education condition, & supports edu dept on different aspect including monitoring.	-suggested IMU solution	-approached team & hired them as advisors -Advisors provided technical knowledge & support, conceived IMU from previous knowledge & experience with successful 'Punjab IMU, conceptualized & planned IMU solution	-provided technical assistance to IMU implementation & trained monitors on interpersonal skills, technology-based monitoring, data analysis, & so on.	-provided trainings to monitors -conducted study on impacts of IMU	-Provided technical assistance to other govts for IMU	-continued its role and supported IMU

			with context modifications, based on previous learning				
			-M&E advisor presented IMU idea to team including PG head (CM) & edu dept & convinced them for IMU				
PG is KP's handler of IMU project & owns it	-emphasized on edu sector improvements based on the understanding of societal need/problem		-asked DFID to come up with solution/idea that provide credible data on schools situation	-provided development budget for IMU through ADP	-owned, demanded & extended IMU -can institutionalize IMU	NR	-continued its role and supported IMU
			-agreed & decided to establish IMU	-use IMU reports for resources allocations & actions	-Same activities as carried in 3 <sup>rd</sup> stage		
				-developed new perf indicators			
				-engaged PG depts in IMU			
Planning & Development dept is PG's dept	NR		-gave approval for IMU PC-I	-does monitoring & evaluation of funds allocation to schools	-Same activities as carried in 3 <sup>rd</sup> stage	NR	-continued its role in IMU
District Administration is PG's dept, & DC is admin head & supervises PG depts.	NR	NR		-DC chairs DSCM, gives directions, takes executive-level & governance related decisions, together with others, & orders DEO/ AC/ Edu dept to implement	-Same activities as carried in 3 <sup>rd</sup> stage	NR	-continued its role in IMU
Finance dept is PG's dept	NR	NR		-transfers funds from assignment account to IMU account monthly	-Same activities as carried in 3 <sup>rd</sup> stage	NR	-continued its role in IMU
				-checks amount withdrawn is justified & has power to reject IMU cheque			
IMU (project organization) is edu dept's unit and monitors schools	NR	NR		-Its PD: did procedural regularities, arranged funding, IMU office,	-Same activities as carried in 3 <sup>rd</sup> stage	NR	-continued its role

performance in  
KP

(Organogram  
attached to  
Appendix O)

procurements,  
hiring, training,  
coordination with  
others. He does  
presentations (of  
monthly schools  
perf at provincial  
level & decisions  
that are made in  
districts), & take  
policy decisions in  
PLM

-IMU developed  
new perf indicators

-Its CO help in data  
processing,

-Its IT staff manage  
all data

-DMO supervises  
entire monitoring  
operation by

DCMAs at district  
level, check

DCMAs perf,  
access data sent by

DCMAs & take  
corrective actions,

liaisons with PG, is  
sectary in DSCM

with DC & DEO &  
presents monthly

perf of district  
schools

-IT staff prepare  
presentation &

report on school  
perf at district &

provincial level, &  
provides software

trainings

-DCMAs do  
district's schools

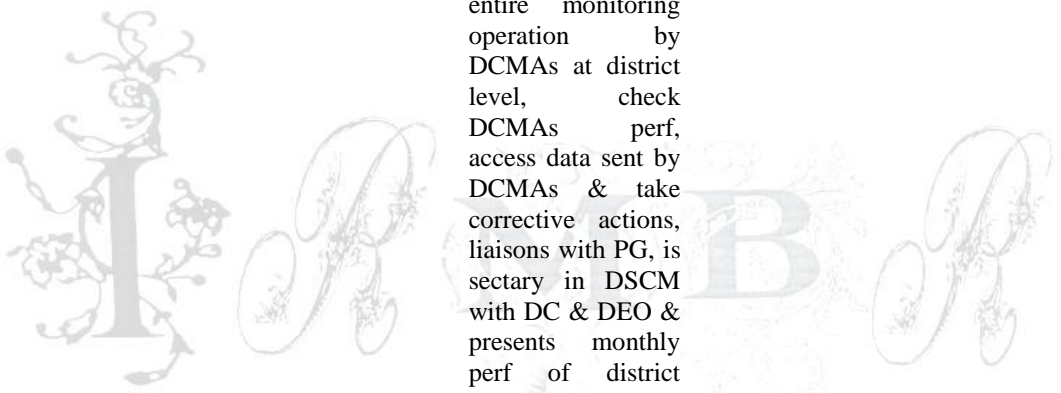
monitoring, collect,  
fill & upload info

on perf indicators  
to database of head

office, follow  
policy decisions &

instructions

-Data Analyst  
manages database,  
data presentations



<b>Perf=</b> Performance	<b>DE=</b> Director Edu	<b>DEO</b> = District Education Officer	<b>PLM=</b> Provincial Level Meetings	<b>DSCM=</b> Steering Meeting	District Committee	<b>NR=</b> No Role
<b>Govt=</b> Government	<b>PG=</b> Provincial Government	<b>ESRU</b> = Edu Sector Reforms Unit	<b>CM=</b> Chief Minister	<b>M&amp;E=</b> Monitoring & Evaluation		<b>AC=</b> Assistant Commissioner
<b>Admin=</b> Administrative	<b>PD=</b> Project Director	<b>CO=</b> Computer operator	<b>DMO=</b> District Monitoring Officer			

Table 5: Role-Ordered Matrix- Role of Actors within SKI

Actors	1. Prompts, Inspirations & Diagnoses	2. Proposals of Ideas	3. Prototyping & Pilots	4. Sustaining	5. Scaling & Diffusion	6. Systemic Change
WHO is partner of GPEI for polio eradication. It is custodian of CPP, technically leads polio camps from planning to evaluation w.r.t operations, resources, & trainings	-identified & discussed problems, causes & consequences with PPL & PG & persuaded them for advocacy	-developed part of operational plan	-arranged additional monitors, increased wages, security expenses (food, transportation & stay) -provided DDM for payments to workers -gave training on operations -carried monitoring & evaluation of operations & presented its analysis, made recommendations & planning for next camps, & ensured readiness for next camps	-didn't arrange HR & finances for long-term -carried SKI exit strategy	-made demand for SKI in other districts (KP)	NR
UNICEF is partner of GPEI for polio eradication. It technically supports polio camps from planning to evaluation, w.r.t operations,	-identified & discussed problems, causes & consequences with PPL & PG & persuaded them for ownership & advocacy	-developed part of operational plan, and whole communication plan	-arranged additional monitors, PTI & local volunteers, money for increased wages & for security personnel expenses (food, transportation & stay), arranged hygiene kits & pamphlets, health camps, RI, & sanitation -gave training on	-didn't arrange HR & finances for long-term -carried SKI exit strategy	-made demand for SKI in other districts (KP)	NR

communication, resources, & trainings			operations, communication, & awareness -carried M&E of operations & communication, presented its analysis, made recommendations, planned & ensured readiness for next camps -carried communication & addressed comm refusals, reversed their misperceptions & developed their trust by branding PT, rebranding CPP as SKI, and MMC, SM & AS of RoI, nutrition & hygiene -carried SM involving PG & PPL & comm -made SKI culturally acceptable			
Health Department is PG's dept, EPI is one of its programmes, which provides vacc services including polio vacc in KP. NSTOP officer is health dept's trained doctor, who provides technical support on surveillance & polio outbreak	-identified & discussed problems, causes & consequences with PPL & PG & persuaded them for ownership & advocacy	-developed part of operational plan	-arranged volunteers, timely & increased payments to workers, & carried monitoring -DDEPI & NSTOP officer analyzed operations, communication & security of camps, made recommendations, planned & ensured readiness for next camps -NSTOP officer helped DC in technical aspects & did data validations, & checked virus in areas	-didn't arrange HR & finances for long term -carried SKI exit strategy	-made demand for SKI in other districts (KP)	Local community health workers were hired
Political Party's (PP) objectives included: to achieve RoI, improve sanitation, & others -A/c to NEAP, support of PP is	-PPL involved his party & asked CM to involve PG in SKI	-PPL asked stakeholders' team to come up with idea/solution -PPL gave suggestion to include hygiene kits,	-PPL asked UNICEF to arrange hygiene kits -PPL & team helped to arrange PTI volunteers ('Tabdeeli Razakar'), carried SKI inaugurations, carried vacc monitoring & other activities, gave	NR	-Provided political support for SKI camps in other districts -PPL decided	NR

needed to deal with political aspect of CPP -PPL takes initiatives & is open to change, takes risk, challenges status quo, accepts challenging goals, & liked by KP's youth		approved idea & named it SKI	press conferences to give awareness & convince comm for vacc		to start another similar SI & provided support
PG is KP's government -A/c to NEAP, PG is responsible to own & implement CPP		-approved the idea & owned it	-did SKI inaugurations, carried vacc (of few kids), press conferences & interacted with public to give them awareness & convince them -arranged increased wages and security for SKI -engaged PG depts in SKI	NR	-made demand for SKI in other districts (KP) - supported another SI -shared SKI idea with Sindh Govt
District Administration is PG's dept, & DC is admin head & supervises PG depts -A/c to NEAP, DC is admin head of CPP	NR	-developed part of operational plan w.r.t its administration	-arranged HR (school teachers) -imposed & ordered police to enforce Section 144 & 3, and carried coordination between different stakeholders -identified security focal points & ensured security, analyzed camps, took actions, & ensured readiness for next camp	NR	NR
Police (Pol) & other law enforcement agencies (LEA) are PG's depts -Pol & LEA (frontier corps, army & militia) are responsible to maintain	NR	CCPO developed security plan & proposed 1 day camp	-arranged HR (also from law enforcement agencies) & provided security -analyzed security arrangements, & ensured security readiness of camps -enforced Section 144 & 3	-didn't arrange HR for long-term	-provided security for SKI in other districts (KP)

public order & enforce laws of the land. A/c to NEAP, Pol provides security to CPP						
Federal Government (FG) -A/c to NEAP, FG is responsible (nationally) for polio eradication -FG supports in resources mobilization, provides approval, guidelines for CPP in Pakistan, & monitors it & provides feedback	NR	NR	-initially opposed, yet later supported SKI implementation w.r.t. resources: finances, vaccines & so on	-supported in making arrangement to stop polio transmission to Pesh from passengers	- supported polio related activities	NR
KP's Community (Comm) A/c to NEAP, comm involvement is key aspect of PP. Comm as volunteers carry polio vacc	NR	NR	-did vacc, informed & motivated comm for vacc, & built their trust, did inaugurations, gave media statements & so on -Local influential & elders supported in security -Religious clerics gave 'Fatwa' in favor of polio vacc, & made announcement for SKI camps -comm refused vacc due to repetitive camps		-same role in other districts, as played in 3 <sup>rd</sup> stage	NR
Donors (BMGF, RInt & JICA) are partners of GPEI, with goal to eradicate polio worldwide. They provide resources	-discussed problems, causes & consequences with PPL & PG & persuaded them for ownership & advocacy	NR	-BMGF provided finances -JICA provided vaccines refrigerators -RInt provided vaccine carriers	-were not willing to give huge amount of money for long- term	-made demand & supply of resources for SKI & another SI, in other	NR

(finances & logistics) for CPP but not present in the field

districts of KP

<b>CPP=</b> Conventional Polio Program	<b>SM=</b> Social Mobilization	<b>DDM=</b> Direct Disbursement Mechanism	<b>PT=</b> Polio Team	<b>Camps=</b> Campaigns
<b>PTI=</b> Pakistan Tehreek-e-Insaf	<b>RoI=</b> Routine Immunization	<b>MMC=</b> Mass Media Communication	<b>PPL=</b> Political Party Leadership	
<b>AS=</b> Awareness Sessions	<b>DDEPI=</b> Deputy Director EPI	<b>Vacc=</b> Vaccination	<b>w.r.t=</b> with respect to	<b>Comm=</b> Community <b>A/c=</b> According
<b>BMGF=</b> Bill & Melinda Gates Foundation	<b>RInt=</b> Rotary International	<b>JICA=</b> Japan International Cooperation Agency	<b>CCPO=</b> Capital City Police Officer	
<b>Govt=</b> Government	<b>PG=</b> Provincial Government	<b>Admin=</b> Administrative	<b>NR=</b> No Role	

Table 6: Role-Ordered Matrix- Role of Actors within MC

Actors	1. Prompts, Inspirations & Diagnoses	2. Proposals of Ideas	3. Prototyping & Pilots	4. Sustaining	5. Scaling & Diffusion	6. Systematic Change
PHC is superior judiciary & its provides justice delivery -Former Chief Justice (CJ) was executive & admin head of KP's judiciary, & KPJA's chairman	-CJ identified problem based on experience & knowledge about problem & its causes	-CJ generated MC idea based on his knowledge, made a team of stakeholders to materialize the idea, approved the idea & report made by judicial officers, & tailored the idea to context. -PHC staff visited & learned about MC, & prepared report	-CJ asked UNDP & PBA, & directed PHC, D&SC, KPJA, & Pol to support MC implementation -CJ inaugurated MC, launched it as a pilot project, & provided directions for its implementation -PHC staff performed work assigned to them	-CJ asked PG to pass MC Acts -PHC drafted two bills of MC	NR	NR
D&SC is subordinate judiciary & it	NR	-SCJ & his team visited Philippine &	-SCJ & team were responsible to carry MC	NR	NR	NR

also provides justice delivery		prepared MC report	proceedings, & SCJ presided MC & maintained a record of resolved cases			
KPJA is PG's department, headed by CJ (PHC). It provides trainings w.r.t judiciary	NR	NR	-DG (KPJA) visited Philippine, & supervised MC proceedings -KPJA acted as implementation partner & provided academic & intellectual support: studied working of MCs in different countries, searched the relevant laws to legalize MC pilot testing, developed TORs & indigenous operation method, provided ADR training, prepared training manual & material, training evaluation & so on, & did some preparatory work for research on MC such as prepared database forms	NR	NR	NR
UNDP strengthens the judiciary and supported MC under its 'Rule of Law' program	NR	-financed study tour to Philippine	-provided financial & intellectual support to materialize MC -financed ADR training & procured prototype of MC bus -its country director inaugurated MC	NR	NR	NR
Peshawar Bar	NR	NR	-Lawyers	NR	NR	NR

Association's (PBA) lawyers acted as mediators, friends of MC				mediated & presented cases to MC judge			
Police (Pol) is PG's department & comply with CJ orders	NR	-DIG police visited Philippine		-It provided security for MC operations	NR	NR	NR
PG is KP's government & provides support to judiciary. However, judiciary is separated from PG	NR	NR	NR		-allocated budget & integrated MC in public programme -provided MC legislation after 2 years	-fully supported this idea in other sector	NR
SCJ= Senior Civil Judge	w.r.t= with respect to	NR=No Role	DG = Director General			PG= Provincial government	

## Discussion & Conclusions

This study helps in understanding that how actors involve and play a role in the complex process of social innovation which has not been investigated in-depth in the literature earlier. The lack of such knowledge hinders the social innovation process as roles of actors are important in progressing stages of social innovation process. The outcome for the research objective and research question suggests that the actors facilitated different stages of social innovation process in different domains of public sector, education, health, and law and justice. Different actors played important role in influencing respective social innovations as they: 1) identified respective problem, 2) generated respective idea, 3) implemented respective idea, and 4) scaled and diffused respective social innovations in public sector. Also, actors sustained the social innovation in one case (that is, IMU- education sector of public sector). However, the sustainability of SI projects in public sector was hindered when actors did not play any supportive role in two cases (that is, SKI and MC- health sector, and law and justice sector respectively). Moreover, the changes brought by social innovations and the impacts of social innovations exhibited in systemic change stage in those social innovations (that is in, IMU-education sector of public sector, and to some extent in SKI- health sector) where actors continued to play their role. Social innovations struggled to continue during the sustainability and systemic change stages due to the time consuming nature of these stages and actors' lack of acceptance, ownership and willingness to continue these social innovations during these stages.

## Theoretical, Methodological and Empirical Contributions

This study contributes theoretically, methodologically and empirically as follows:

- 1) This study extends the body of knowledge regarding how social innovation happens-social innovation process. It also acknowledges and demonstrates non-linear, interactive and contextually embedded nature of process, which is most important in understanding social innovation phenomenon.
- 2) This study helps to further understand how social innovation meets social needs and incorporates multiple actors. This is done by showing how three social innovation projects of public sector KP: 1)

met their respective social needs of improving education provision, health services and justice provision; and 2) incorporated multiple actors/ key stakeholders of education, health and law and justice sectors.

- 3) This research helps to further understand how actors such as organizations, firms and non-firms as different stakeholders play their respective roles, and make important contributions in social innovation projects. Moreover, it also helps in further understanding how firms play a dominant role and non-firms play a supporting role, and individuals of these firms and non-firms play important role. Consequently, this study acknowledges the role of individuals, and role of organizations that has been ignored in social innovation literature. This study also acknowledges the role of actors from outside the public sector.
- 4) This study uses multiple case studies in order to better understand and study context-dependent phenomena of social innovation and the existence and role of different actors in social innovation process, providing accurate and comprehensive descriptions. The cases include social innovations that were perceived as successful and those which were not perceived as successful, and ignored, thus providing comprehensive lessons and avoiding 'pro innovation biasness'.
- 5) This study empirically provides important insights on social innovation in public sector of developing country as most of existing studies are carried in private sector of developed countries. This contextual difference reveals that social innovations in public sector of developing country Pakistan are similar with respect to social innovation process and role of different actors to developed countries, showing wider applicability of these aspects. However, in the context of public sector of developing country, most social innovations face sustainability issues (that is, either get stuck or ended in sustaining stage) and actors fail to sustain respective social innovations due to different reasons.
- 6) This study explains the social innovation process and the existence and role of different actors in different domains of public sector that is, education, health, and law and justice sector, adding greater validity to results.

## Implications for Researchers and Practitioners

### Implications for Researchers

- 1) Although social innovation is gaining attention in academic research, the field is still emerging. There is a need to consider the phenomena of social innovation in the future research, exploring and understanding this new form of innovation. Moreover, it is recommended that future empirical research needs to be conducted on social innovation process, in order to generate a consistent body of knowledge on how this new form of innovation occurs and how it is managed. Therefore, understanding the practice of social innovation and contributing to social innovation process theory and its generalizability/ transferability.
- 2) It is also recommended that future research should be conducted in public sector of developing countries and in order to add new insights. As it can be concluded tentatively from this study that social innovation phenomena are functional and equally influential in public sector of developing country and culture like Pakistan.
- 3) Future research should investigate the specific sectoral context for better understanding the social innovation. As this study reveals that specific characteristics of social innovation and the respective social innovation processes occurred in different way based on the sector context in which they were carried
- 4) Future research needs to apply theory/theories for explaining social innovation phenomena and support it with empirical analysis. Thereby, building strong theoretical and empirical foundation for social innovation. Specifically, based on context-dependent nature of social innovation and role of influential factors, future research can apply systems of innovation specifically sectoral system of innovation to public sector and social innovation for better understanding and explanation. Thereby, confirming the role of actors and further investigating the role of other factors of sectoral innovation system such as knowledge, technologies, learning processes, resources and demand, institutions, and interactions of

these factors, in influencing social innovation process. This will add to generalizability/ transferability of sectoral system of innovation theory.

- 5) It is recommended that future research needs to investigate the influential factors and condense the complex phenomena into taxonomy of factors, in order to build consensus on set of factors that are common across different studies. Moreover, these factors need to be empirically validated within different contexts to measure their sensitivity to contexts.
- 6) Future work needs to draw influence from philosophy of pragmatism, as it is more compatible with the social innovation.
- 7) Future research needs to conduct case study research for complete understanding of social innovation based on the context-dependent nature of social innovation.
- 8) Future research is recommended to apply mixed methods research incorporating qualitative and quantitative approaches to comprehensively study social innovation phenomena.

### **Implications for Practitioners**

- 1) Government and public sector needs to give priority to social innovation in developing countries in order to bring public sector reforms and address societal challenges. Moreover, the outcomes from social innovation can be used in developing policies for better service delivery.
- 2) For initiating social innovation projects, the problem, causes and consequences need to be identified, the link between problem and solution needs to be established, and clarity of impacts and benefits for all stakeholders needs to be made. Moreover, social innovation projects can be carried by adapting its idea from other contexts, and insights can be drawn from the sources of ideas. This can be done by following national or international role-models who have successfully carried social innovations for solving similar social problems and meeting social needs. However, for social innovation to succeed, amendments need to be made according to respective contexts incorporating cultural aspects. Moreover, the practitioners should carry respective social innovation in public sector either by completely replacing or carrying it parallel to conventional system, to overcome its ineffectiveness and inefficiency issues, consequently meeting social need. Accordingly, proper planning should be done and formal approval for project should be sought. Later, sufficient arrangements and time should be given for implementation. Activities should be carried as planned and monitored and assessed for meeting objectives/goals, and adjustments should be made for unexpected events and unplanned issues. Moreover, sustainability issues need to be tackled. This understanding can help in managing the social innovation process. That is, how to carefully plan, better design and implement the process of social innovation in a more practical way by considering various activities that occur.
- 3) It is recommended that in order to sustain the social innovation project in public sector: 1) there should be evidence that the project works, meets objectives and is beneficial, 2) its activities should be operationally manageable, 3) it should be in-line with meeting some bigger, long-term objectives, 4) there should be proper security arrangements for project activities, 5) project activities should be compatible with established systems or procedures when engaging same people, or in case of incompatibility with established system, new people should be involved to carry the project, and 6) the concluded project activities are continued through a new project.
- 4) The public sector organizations should identify relevant actors as it will be helpful for policy makers to consider social innovation in the wider policy landscape, and guide the development of policy to promote social innovations in public sector.
- 5) The public sector organizations should ensure the willingness and ownership by all stakeholders in social innovation projects either by involving them or addressing their interests.
- 6) The public sector organizations should enhance community awareness regarding the social innovation projects and their role and participation in the projects.

## Limitations of the Study

Despite the robustness of this research, there are some limitations of present study discussed as follows:

- 1) This research provides a snapshot of role of actors in social innovation process by carrying a cross-sectional study due to time constraints. However, a longitudinal study can be undertaken in order to show the iterations of social innovation process and role of actors in these iterations.
- 2) This study is limited geographically to KP, theoretically to existence and role of actors in social innovation process, and sectorally to public sector domains of education, health, and law and justice.

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