

A methodology for case study research to analyse innovation platforms in South African healthcare sector

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Abstract

The innovation ecosystem perspective and value chain perspective on innovation platforms are well established lenses in the literature. This paper reviews three case study research designs techniques namely casual process tracing (CPT), congruence analysis (CON) and systematic combining (SC). CPT relies on empirical observations to provide a rich description of casual process. CON focus on drawing inferences from concrete observations with predictions deduced from theories to relevance of these theories. SC allows a continuous evolution of theoretical frameworks, fieldwork, and case analysis to development of new theories. A detailed description of each approach is given by highlighting the focus of the approach, theories that can be evaluated, case selection criteria, data generation mechanisms, analytical approaches and expected generalisations. CON was identified as the most suitable approach to satisfy the objective of the research. The contribution of this article is development of steps to conduct the case study. The steps developed are 1) research question generation 2) development of theoretical frameworks 3) selection of cases 4) observations 5) analysis and 6) generalisations. The next area of research in this study is the development of theoretical frameworks from innovation ecosystems perspective and value chain perspective.

Keywords

Innovation platforms, Congruence analysis

1. Introduction

Africa faces major challenges to improve the quality of life of its citizens leading to greater equity, economic growth and social stability. The disease burden of illnesses such as HIV/AIDS, Malaria and TB in Africa are devastating to societies and perpetuate economic and social marginalisation of Africa's people. Challenges faced towards equitable access to and quality of healthcare include inadequate resources, limited access to health services and technologies and abject poverty. The role of innovation and its importance to achieve improved healthcare is widely acknowledged and have also been identified as priorities in the Sustainable Development Goals through SDG3 (Good Health and wellbeing) (UNDP 2015a) as well as SDG9 (Industry, Innovation and Infrastructure) (UNDP 2015b). South African public healthcare sector is under resourced, overloaded and often characterized as being inefficient in terms of meeting its mission of accessible quality health care (Mayosi et al. 2012). On the other end the private sector has been reputed for its world-class facilities and care provision (Pillay 2009). Public healthcare challenges sector are grouped into four categories which are 1) strategic challenges, 2) demographics, 3) social determinants and 4) epidemiological profile of the country.

In the preceding *strategic* planning tenure (2010-2014), healthcare stakeholders developed a charter (Negotiated Service Delivery Agreement (NSDA)) outlining key interventions to achieve the desired healthcare system in South Africa. The strategic goals formulated include 1) increasing life expectancy, 2) decreasing maternal and child mortality rates 3) combating HIV and AIDS and tuberculosis; and 4) strengthening healthcare systems effectiveness (Department of Health 2015). NSDA made progress through the strategic interventions implemented by the health sector, however deterioration of public healthcare facilities continued. This was mainly due to fragmented solutions among healthcare stakeholders in South Africa healthcare system (Department of Health 2015). The South African population was estimated to be 56.5 million in 2017 (Stats SA 2017). With a *demographic* profile of 15.1 million (29.2%) aged younger than 15 and 4.15 million (7.8%) older than 60 years, which means that 37% of the population is in the “dependant” bracket (Department of Health 2015). Coupled with high levels of unemployment (soaring above 27%) (Stats SA 2017) and 68% of the population depending on public healthcare, the national healthcare system is overloaded. Resources have been strained further by the influx of refugees and economic migrants into the country (Department of Health 2015). *Social determinants* are circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness (Bradshaw 2008; Scott et al. 2017). Social circumstances have a huge impact on healthcare outcomes though they are not directly linked to healthcare. Factors that affect these circumstances in South Africa include employment, knowledge and education, community and infrastructure, gender norms, income and poverty (Ataguba et al. 2015; World Health Organisation 2017). The existence of inequalities in South African societies ultimately affects the outcomes of the healthcare system (Ataguba et al. 2015). Origin of these disparities to some extent could be linked to the colonial and apartheid legacy (Coovadia et al. 2009). With the origin and complexity of these social disparities a multisector approach that promotes interdisciplinary collaboration is required to resolve these challenges (World Health Organisation 2017). *Epidemiological Profile* of South Africa is entangled in a quadruple of diseases that consist of human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS) and tuberculosis (TB), high levels of maternal and child mortality and other communicable diseases, injuries and non-communicable diseases (NCDs) (Gray & Vawda 2017). South Africa experience serious HIV and TB epidemics and is considered as a home to the world’s largest number of people living with HIV. Out of the approximately 54 million population in 2012 about 6.4million were HIV infected (Gray & Vawda 2017). An estimate one-fifth of South African women in their reproductive ages are HIV positive and this presents a complex challenge to the national healthcare system (Department of Health 2015). Maternal and child health is a cause of serious concern in South Africa with mortality rate under the age of 5 years being 49 deaths per 1000 live births as of year 2013. This mortality rate ranks South Africa as one of the highest infant mortality in sub-Sahara Africa (Coovadia et al. 2009). In 2015 South Africa injury death rate of 158 per 100 000 was higher than the African average of 139.5 per 100 000 and twice higher than global average of 86.5 per 100 000 (Department of Health 2015). More than two thirds of injury deaths are caused by intentional injuries due to personal violence and road traffic accidents. Department of Health (2015) acknowledges the need for an inter-sectorial solution to combat violence and injury to improve the epidemiological profile of the nation. With the increased prevalence of NCDs globally, South Africa is not spared and NCDs contribute 33% to the burden of disease. Common risk factors include tobacco use, lack of exercise, unhealthy diets and excessive use of alcohol (Department of Health 2015). Innovation mechanisms often fails to implement scalable solutions to address South African healthcare challenges. This is mainly due to closed innovation among stakeholders which has plunged the sector into a negative vicious cycle of deteriorating health standards and limited healthcare access due to fragmented solutions.

1.1 Defining Innovation Platforms

Innovation platforms offers an alternate mechanism to healthcare innovation by serving as a space of interaction for stakeholders to interact and develop healthcare innovations in a collective manner (Thiele et al. 2011; Kilelu et al. 2013). Healthcare stakeholders include patients, caregivers, clinicians, healthcare institutions (like hospitals), insurers, healthcare industrial associations, policy makers, researchers, national government and research institutions. Diverging interests of stakeholders come to the fore and compromises

are made to develop common objectives that can be achieved more efficiently (Amann et al. 2016). A distinct feature of IP(s) from other traditional innovation paradigms of problem solving is the concept of “sector boundary spanning” that brings in stakeholders from other sectors to assist in developing healthcare solutions (Dubé et al. 2014). A review conducted by Marais (2018) identified different types of IP(s) in healthcare and these platforms are configured according to theme, sector or disease covered. From the review common IP(s) include living labs, open health platforms, service value networks, collaborative research networks, multi stakeholder platforms and traditional innovation platforms (Marais 2018). Innovation platforms are built upon a set of fundamental concepts which include capacity development, change management, conflict resolution & dealing with power dynamics, construction & deconstruction of sub-systems, context of emergence, demand articulation, dynamic processes, informal & formal institutions, incentives & reward systems, infrastructure, knowledge management, scaling up & scaling out and termination of IP (Marais 2018). There is absence of explicit theory behind the creation of innovation platforms. Platform facilitators has been following their noses in developing platforms and the lack of a conceptual base (on IPs) combined with the complexity of managing platforms has resulted in adoption of potentially conflicting functions in innovation platforms hence affecting innovation (Thiele et al. 2011). Thus analysis of IP plays a key role in developing platforms, managing stakeholder dynamics and aligning stakeholder activities to achieve common objectives (Lamers et al. 2017). Analysis of innovation platforms has taken multiple approaches most prominently the *ecosystems perspective* and *value chain perspective*. *These lenses are disused in more depth below.*

1.2 A reflection on the Ecosystem perspective

The *Ecosystems* perspective consider system building blocks (components) which consist of stakeholders, institutions and networks (Hekkert et al. 2011). Actors refer to participants in the system such as universities, researchers, pharmaceutical companies, patients, government and other actors in the healthcare sector. Institutions refers to “hard” institutions such as supportive legislation or regulations and “soft” institutions such as culture that guide interaction rules, while networks are developed through to linkages between actors. Institutions provide conditions for collaboration of stakeholders facilitating innovation. Innovation ecosystems are dynamic, purposive communities with complex, interlocking relationships built on collaboration, trust, and co-creation of value and specializing in exploitation of a shared set of complementary technologies or competencies (Jackson 2011; Gobble 2014).

An ecosystem is complex and dynamic and this mean that injecting same inputs at different timeframes into to the system might not give the same results (Gobble 2014). The term “ecosystem” originated in the science of ecology and was used to clear up confusion in the terminology of plant communities (Tansley 1935; Shaw & Allen 2015). The emphasis on connections and cycling makes the biological ecosystem a good analogy of what happens in innovation ecosystems. Apart from the biological ecosystems Tsujimoto et al. (2017) conducted a review that identified four perspectives of ecosystems (around the innovation context) which include industrial ecosystems, business ecosystems, information technology platform ecosystems and multi-actor network ecosystems. *Industrial ecosystems* focus on the optimisation of energy and material of industrial activity and using wastes generated by one industrial activity as raw material for another industrial activity (Frosch & Gallopoulos 1989). This concept give rise to a closed loop system in which energy and raw materials are used efficiently and wastes (by products) of one industry are not deposited but used as raw material for another process within that ecosystem. *Business ecosystem* evolved from industrial ecosystems (Tsvetkova & Gustafsson 2012), the concept seeks to understand and examine the business model of an integrated industry created by an industrial ecosystem. Industrial ecosystems brought boundary spanning business models and business ecosystems seek to improve value creation mechanisms within the ecosystem. *Information technology (IT) platform ecosystems* are composed of industry wide networks based on complex integration between IT organisations (Cusumano & Gawer 2001; Tsujimoto et al. 2017) in which organized innovators develop their own complementary products, technologies, or services to support the main product (Gawer & Cusumano 2014). *Multi-actor network ecosystem* (which is what we will refer to as innovation ecosystems in this study) consist of various actors

(can be referred as stakeholders) with different attributes and are intentionally brought together to identify common challenges and develop solutions to overcome those challenges (Möller & Halinen 2017). Innovation ecosystems allow stakeholders to create value that no single firm could have created alone due to its collaborative nature (Adner 2006). An innovation ecosystem is created around a central node which can be an innovation platform with a set of social or economic conditions that draws key players together (Gobble 2014).

Critics of the ecosystem construct argue that there is no distinguishing between innovation ecosystems and other systems of innovation which include the concept of national innovation systems (Oh et al. 2016). Oh et al (2016) argue that there is a difference between natural ecosystems and innovation ecosystems in (1) the presence of intention and teleology, and (2) the acknowledged importance of governance in innovation ecosystems (Oh et al. 2016). This study takes note of these disparities but argue that the ecosystem metaphor between the two systems is not based on the origin of existence (which is natural on natural ecosystems and fostered on innovation ecosystems). The study argues that the ecosystem metaphor is built upon the complexity of the systems, interactions of entities in and dynamic evolution on both ecosystems (natural and innovation). The study further argue that both natural ecosystems and innovation ecosystems are governed, natural ecosystems are governed by natural laws and innovation ecosystems are governed by institutions (governing procedures and rules) established by stakeholders. Möller & Halinen (2017) suggest that ecosystem has become a buzzword which adds very little to analysis sometimes. When ecosystems is treated as a study domain, Möller & Halinen (2017) also suggest that researchers should clearly outline the differences with other innovation labels like “sector” and “cluster”. The study agrees that innovation ecosystems are not clearly defined and part of this study seek to explain the dynamics of a successful healthcare innovation ecosystem.

1.3 A reflection on the Value Chain perspective

The *Value Chain (VC)* perspective focuses on exploring new opportunities for adding value by exploring inefficiencies within value chains. A healthcare VC is an economic unit of analysis of a particular healthcare commodity or a group of commodities that encompasses a meaningful cluster of healthcare activities linked by market relationships (Pietrobelli & Rabellotti 2009). The chain is made up of organisations that work on the product or service from inception until the final consumer (Kaplinsky & Morris 2000). The traditional approach on value chain used strategists to benchmark the organisation performance against its competitor’s performance (Normann & Ramírez 1993). This would reveal gaps within the value chain and the strategist will generate plans to close them. Strategy became primarily the art of positioning an organisation in the right place in the chain. However competitors will embark on the same exercise in a bid to gain market share and the practice eventually became a zero-sum game (Peppard & Rylander 2006). Due to this fast changing competitive environment the fundamental logic of value chain changed from its heuristic use to analytical use (Kaplinsky & Morris 2000). The focus shifted from competition to creation of value within the chain (Peppard & Rylander 2006).

The Value Chain perspective does not give insight on how to manage stakeholder engagement and interconnections in the context of an innovation platform. Value chains are often analysed from a linear progression perspective and capturing details of stakeholder interactions and connections is complicated (Normann & Ramírez 1993; Roper et al. 2008; Prajogo et al. 2008; Anandajayasekeram & Gebremedhin 2009; Ayele et al. 2012). However complex systems like healthcare systems cannot be represented linearly hence it becomes difficult to fully comprehend the dynamics of stakeholders’ interaction and connections through the value chain perspective alone. Healthcare systems consist of stakeholders with common and conflicting goals and modelling such dynamics on a value chain is fraught. These stakeholders include government departments with the goal to provide quality and affordable care to its citizens, private medical providers with the goal of providing healthcare services at a profit, patients with goal of receiving quality care and regulatory organisations with the goal of minimising healthcare risks. It is through the interaction of these stakeholders that the challenge of fragmented solutions currently faced by the public healthcare can be resolved thus capturing details of interactions is crucial. It is important to note that some value chains are microcosms of a broader value chain. And there is need to capture the dimension of value chain

(platform) within specific value chains (platform). Lamers et al. 2017 proposed a multilevel approach of innovation platforms with such circumstance and this can give clear insight of interventions needed at every level of the platform.

1.3 Problem Statement

It can be argued that the ecosystem perspective is poorly constructed and there is no distinction between ecosystem and other innovation system concepts (Oh et al. 2016; Möller & Halinen 2017). However ecosystem analogy offers insight on the connections in an innovation system that consists multi-stakeholders (Jackson 2011). The value chain perspective is centred on exploring new opportunities for creating value within the chain (Jurowetzki et al. 2018). Value chain activities can be summarised as knowledge creation, knowledge transformation and creating value from new knowledge (Roper et al. 2008; Ayele et al. 2012). However the perspective shortcomings include not exploring stakeholder connections and dynamics.

Both the ecosystem and value chain perspectives have their strengths and shortcomings and in this study the aim is to examine what aspects of these two perspectives contribute to explore the functioning of innovation platforms. The study will contrast and compare these perspectives and attempt a formulation of a novel analytical framework that combine concepts from these perspectives.

There are however certain methodological choices to be made to address this ambitious aim. Hence this paper focus on developing steps to conduct this study and to select an appropriate approach to evaluate and possibly combine the ecosystem perspective and value chain perspective in the context of healthcare innovation platforms.

2. Literature analysis

Case study research designs can be defined as a small number of empirical studies conducted with the primary interest of observing cause of effects in a phenomenon (Sinkler 2011). The research approach can be used in a small population of (N) studies and then generalize observations across a population of similar cases. The approach allow rigorous reflection on the relationship between empirical observations and a theoretical framework. The approach provides a unique avenue for developing theory using in-depth insights of empirical observations and their context (Dubois & Gadde 2002). There has been sharp criticism against the case research method. Critics argue that 1) case studies provide little basis for scientific generalization and the method is too situationally specific 2) some investigators are sloppy and allow equivocal evidence on distorted views to impact the findings and conclusions of the subject being investigated 3) case studies sometimes are a pseudo description of events with no meaningful conclusions 4) some case studies are quasi-deductive in which examples of data presented is only meant to support frameworks being presented (Barratt et al. 2011; Sinkler 2011; Ketokivi & Choi 2014). Thus, critics label the method as an inaccurate research technique that narrowly focus on testing general theories. This paper argues that a case study is a useful tool of inference and using theoretical frameworks to explain empirical observations from a small number (N) of cases is an important contribution to scientific discourse. Since case study research designs are based on configurational thinking the contribution is case centred (contextual). To select an appropriate case study research approach to determine the explanatory power between innovation ecosystems perspective and value chain perspective this study will review the following three prominent case study research designs: causal process tracing, congruence analysis and systematic combining.

a) *Casual process tracing* approach is a tool for inferring causality with inductive characteristics. The approach relies on empirical observations to provide a rich description of a casual process and outline convincingly detailed arrangement of specific conditions that has led to an outcome. Casual process tracing generates explanations that are relevant to the case being tested and cannot be generalised to other solutions. The approach enables the researcher to combine a positivist and an interpretivist outlook (Porta & Keating 2008). From the positivist perspective the approach is focused on determining a causal link between different factors and through the use of archival documents and interviews the researcher investigates

whether the casual process of the theory can be observed accurately. From the interpretivist perspective the approach is used to search for ways in which the casual link manifests itself and the conditions it does so. The approach requires searching for analytical evidence that give a basis for descriptive and casual inference (Collier 2011).

Causal process tracing mechanisms investigate the “force” behind an event that give rise to a certain outcome. To identify evidence behind an event that can be classified as diagnostic depends on prior knowledge of the researcher. Sources of knowledge extension identified in this paper include *conceptual frameworks*, recurring *empirical observations* and *pre-existing theories* (Kay & Baker 2015). *Conceptual frameworks* are sets of interrelated concepts with general ideas modelled on how concepts can be operationalised. *Recurring empirical observations* are concrete patterns among two or more phenomena that can be viewed casual or interpreted descriptively. *Theories* are either built by experts through connecting verified related hypotheses or through convincing explanations on why empirical phenomenon occur. The next step is to draw descriptive inference to adequately describe an event. The step begins by giving detailed accounts at snapshot intervals and this enables a good analysis of change and sequence. The last step of casual inference is empirical testing and can be summarised in four empirical tests which include 1) straw in the wind 2) hoop 3) smoking gun and 4) doubly decisive (Collier 2011; Kay & Baker 2015). The test are classified according to whether passing the test is necessary for accepting the inference. The decision to accept which test is appropriate for a particular piece of evidence involves different assumptions and interpretations. Hence there are higher chances of cognitive biases in casual processing testing that might distort the results of the study (Porta & Keating 2008).

b) Congruence analysis is an approach that focus on drawing inferences from concrete observations with predictions deduced from abstract theories to the relevance of these theories (Blatter & Blume 2008). This is achieved by construing specific propositions and observable inferences from abstract theories. The approach is theory oriented and uses case studies to make insightful contributions. The analysis can add to scientific discourse by 1) refining specific theories 2) developing new theoretical synthesis 3) strengthening the position of a theory in comparison to other theories and 4) strengthening new theories to be recognized in a field (Blatter 2012). Blatter (2012) identified two subtypes of congruence analysis which consists of *competing theories* approach and *complementary theories* approach. The *competing theories* approach is closely related to the positivist and realist epistemologies but its main limitation is that it cannot verify or falsify theories through experimental testing. Instead the approach concentrates on testing the explanatory power of a theory relative to other theories by observing expectations deduced from the theory against expectations of competing theories. Competing theory approach is based on the principle that theories stand in stark opposition to each other, and the goal is to identify the dominant theory (Annamalai 2012). The *complimentary theory* approach is closely related to a constructivist epistemology. The approach relies on the principle that theories lead to complimentary implications and plurality of theories provides a basis for comprehensive explanations and conceptual comprehension. The principle then give room for the researcher to determine theories that are able to provide new insights (Blatter 2012). However these two subtypes of congruence analysis are completed in three separate steps which consist of 1) developing the *theoretical frameworks* 2) constructing *system predictions* from the abstract theories from the frameworks 3) *analysis* by comparing deduced expectations with empirical observations.

Congruence analysis requires the researcher to reflect intensively on the context in which the research is to occur and generate a comprehensive *theoretical framework*. The analysis requires *system predictions* to be deduced from abstract theories of theoretical frameworks first and this improves reliability and inter-theoretical fairness (Sinkler 2011). System predictions include assumptions about important actors, innovation dynamics and corresponding institutions. The *analysis* is then completed by linking concepts to concrete observations (Blatter & Blume 2008). However arbitration of observations to specific concepts is not always flawless. This is mainly due to an absence of clear boundaries in most abstract concepts. Hence the researcher need to be fully acquainted with the concepts to be able to make inferences with concrete observations (Annamalai 2012). The qualitative nature of this analysis allows for repeated interactions between theoretical suggestions and observed indications. Hence it allows full exploitation of information related to the empirical case to draw inferences about the relevance of theoretical concepts

(Blatter & Blume 2008). The abstract theory must show that it has higher level of empirical congruence than other theories by predicting crucial aspects of the actual process more correctly.

c) Systematic combining was first introduced by Dubois & Gadde (2002) as an abductive approach to case research. Systematic combining allows a continuous evolution of theoretical framework, empirical fieldwork, and case analysis and has been referenced useful for the development of new theories (Dubois & Gadde 2002). The method consist of two stages 1) matching theory with reality and 2) direction and redirection theories (Dubois & Gadde 2014). These two phases are based on the understanding that by constantly going back and forth between empirical observations and theory, the researcher is able to expand his or her understating of both theory and empirical phenomena. Just like congruence analysis the method consist of a preliminary framework and this framework is tested through empirical fieldwork. Empirical observations might result in identification of unanticipated related concepts thus allowing the framework to evolve and further testing the updated framework.

Matching theory and reality is the ultimate objective of systematic combining. With the initial analytical framework, the researcher analyse the phenomenon by drawing parallels, ask question, generate hypotheses and make comparisons. Guided by the empirical observations the researcher then evaluates the initial framework and if the framework do not match observations the framework is revised (Dubois & Gadde 2002). With the new framework the researcher then performs another round of analysis. The method is iterative, nonlinear and depends on continuous combination of theory and observations. During analysis, data should not be forced to fit into pre-existent categories, rather categories are to be developed from empirical data. The abductive approach takes advantage of the systematic character of the empirical world and theoretical models (Dubois & Gadde 2014).

A more convincing and accurate conclusion in a case study is based on several different sources of information following a corroborative mode. Using different sources of information whilst shifting between analysis and interpretation denotes triangulation. Systematic combining emphasize on verification by using multiple data sources and this may lead to revelation of new dimensions unknown to the researcher. If the verification process is done in line of the current framework and with aim of discovering specific data this may result in *redirection* of the study (Dubois & Gadde 2002).

Dubois & Gadde (2002) argues that the abductive approach utilised by systematic combining is to be seen as different from a mixture of deductive and inductive approaches. The approach creates fruitful development of new concepts by combining theoretical models and empirical observations. On credibility of case studies, systematic combining sampling procedure is similar to theoretical sampling and the objective is to be able to match reality and theoretical constructs. Hence sampling is a continuous process in systematic combining that overlaps with data analysis.

3. Towards a methodology for analysing innovation platforms

This section summarise the key issues of case study research designs identified for the three techniques. Case study concepts examined include focus of the approach, quantity of theories that can be evaluated, case selection criteria, data generation mechanisms, analytical approach and expected generalisations (See Table 1 for the summary). The ultimate goal of the entire study is to contribute to the body of knowledge by examining the relevance of ecosystem perspective and value chain perspective to innovation platforms and possibly develop a more insightful approach. The authors will conduct this exercise on innovation platforms in South African healthcare sector. The criteria to select the appropriate approach (between casual process tracing, congruence analysis and systematic combining) is based on the aforementioned reasons. Table 1 indicates that the congruence analysis approach is the most appropriate to conduct the case study research. The approach satisfy all research aspirations of the authors and therefore is adopted.

Table 1: Case study research approach selection

Case study aspects	Casual process tracing (CPT)	Congruence analysis (CON)	Systematic combining (SC)	Possible approach
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a) Focus	Casual configurations and combinations of casual conditions	Theoretical frameworks that compete or complement each other.	Matching theory and reality	CON & SC
b) Number of theoretical frameworks (theories)	Not applicable for the approach since it is concerned about configurations and conditions however these can be explained by different theories.	Multiple	Single	CON
c) Case selection	To consider accessibility and theoretical relevance of the outcome	Selection is according to researcher's aspiration.	Selection according to researcher's aspiration.	CPT, CON & SC
d) Data generation	Casual chains are derived from observing cause, consequences and perceptions and motivations of actors.	Develop predictions from abstract concepts of theoretical frameworks.	Data is derived from theoretical framework that will be matched with reality.	CPT, CON & SC
e) Analysis and conclusions	Identification of configurations of conditions that are necessary and sufficient for certain outcomes to occur.	Determining difference among abstract theories according to level of congruence between predictions and outcomes. This gives relative importance and can provide a comprehensive explanation by combining theories.	If theoretical concepts are shortcoming in explaining the empirical phenomenon. The concept is updated and the matching theory and reality exercise repeated. The exercise is iterated until the theory explains the phenomenon accurately.	CON & SC
f) Generalization	Beyond the case study under investigation, the approach gives possibilist generalisations.	The approach draw conclusions from the explanatory power of theories and gives theoretical generalisation	An improved theory which is case centred generalisations are presented.	CON

4. Conclusion

The study has selected the congruence analysis as the most appropriate approach to evaluate insights on innovation platforms between value chain perspective and innovation ecosystem perspective. The adopted approach consists of six steps namely 1) research questions development, 2) theoretical framework development 3) Cases selection, 4) observations, 5) analysis and 6) conclusion (See Table 2).

Table 2: Congruence analysis steps

Step	Explanation
1) Development of research questions	The research is centred on determining which theoretical concept provides relevant insights on innovation platforms between innovation ecosystem perspective and value chain perspective?

2) Development of theoretical frameworks	Theoretical frameworks which contains abstract concepts of innovation platforms will be developed through the grounded theory method.
3) Selection of cases	Selection of relevant case is according to researchers aspirations and the authors will select a case in South African healthcare system.
4) Observations	Generation of data corresponding to the expectations deduced from abstract theories. This will be achieved through semi structured interviews with platform facilitators and stakeholders in the identified cases. The expected resultant is a set of confirmations and or contradictions for each theoretical framework under investigation.
5) Analysis	Will identify the differences among the theories in respect to the level of congruence between expectations and observations. Account the relative importance of selected theories and develop a comprehensive explanation through integration of abstract theories.
6) Conclusion	Will draw conclusions from the explanatory power of frameworks and their relevance to scientific discourse.

The contribution of this study is the selection of an appropriate case study research approach and structuring steps to conduct the case study. Proper structuring of the study aids in countering some of criticisms to case study approach and gives transparency to the entire exercise. The next research stage for this study is development of theoretical frameworks from the innovations ecosystem perspective and value chain perspective.

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