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# **Serial Entrepreneurship: An Integrative Critical Review of the Antecedents, Moderators and Outcomes**

**Johnny Syllias, Ph.D. in Management**

Kent Business School, University of Kent, Medway Kent, ME4 4ET, UK

E-mail: [js2108@kent.ac.uk](mailto:js2108@kent.ac.uk)

**Dr. Joseph Amankwah-Amoah**

Kent Business School, University of Kent, Medway Kent ME4 4TE, UK

E-mail: [j.amankwah-amoah@kent.ac.uk](mailto:j.amankwah-amoah@kent.ac.uk)

**Dr Shenxue Li**

Kent Business School, University of Kent, Canterbury Kent, CT2 7FS, UK

E-mail ; [S.Li@kent.ac.uk](mailto:S.Li@kent.ac.uk)

## **Serial Entrepreneurship: An Integrative Critical Review of the Antecedents, Moderators and Outcomes**

### **Abstract**

Serial entrepreneurship is increasingly gaining remarkable research attention partly due to its potential contribution to economic development. In spite of the growing body of serial entrepreneurship research, there has been a limited understanding about the current state of knowledge on this pivotal subject. This stem from fast growing body of literature, which has not necessarily translated into improved understanding of key issues. Based on an integrative review of the literature, we developed multilevel model of serial entrepreneurship, which captures antecedents, transition process, moderators and outcomes. This review identifies persistent themes in the literature which help to clarify the ambiguities surrounding the serial entrepreneurial phenomenon. The authors provide recommendations for future research that employs multi-paradigmatic and systematic research methodologies to generate a more comprehensive and cohesive theory of serial entrepreneurship.

**Keywords:** Serial entrepreneurship; serial entrepreneurs; institutional entrepreneurs, corporate entrepreneurs.

## ***1.0. Introduction***

It has been widely acknowledged by entrepreneurship researchers and policy makers in developed economies in particular that, those serial entrepreneurial (SEs) processes and practices foster socio-economic development and growth (Low and MacMillan, 1988; Wright, et. al. 1998; Sarasvathy and Venkataraman, 2011; Shepherd and Patzelt, 2011). Serial entrepreneurial phenomenon is multi-dimensional which consists of individual, corporate and institutional levels. In general individual serial entrepreneurs (SEs) refers to an experience entrepreneur who disown or close a venture and over time rebounds back to sequentially create new venture. Whereas corporate serial entrepreneur (SE) refers to group of entrepreneurs/team within an existing firm who with support of top management team combine the firms' untapped resources in a novel way to sequentially create new internal corporate venture. Such action helps the firm to strategically renew self and moreover contribute to sustain competitive position. Institutional SEs refers to individual or group of individuals within existing institutions who focusses more on dynamic institutional logic that repeatedly foster and stimulates productive or unproductive entrepreneurship which in turn help boost higher rates of socio-economic development and growth. Some scholars have suggested that we are in an era of creative destruction for entrepreneurship (Brock and Evans, 1989; Acs, 1992). According to Deakins, (2012), there is multiple consistent evidence from studies which shows increasingly shifts from traditional socio-economic activities which tends to depends on larger firms for social-economic development to smaller and medium-size enterprises. One possible reason is the rapid advancement of industry technologies, in particular and information, communication technologies (ICT). This in general calls for structural shifts that are flexible and can adapt to trends of dynamic micro and macro business environments. These structural shifts requirements are increasingly posing challenges as well as negatively affecting productivity of many larger existing firms in the economies of the world. Baumol and Strom (2007) asserted that entrepreneurs who focus on innovation and new venture creation plays important role in socio-economic development. New venture creation and ownership are experiential in nature (Starr and Bygrave, 1991; Ucbasaran, et al. 2003, 2008; Amaral, et al. (2009)

The general definition of SE suggests that the main function of SEs is sequential venture creations. Furthermore SEs generally tend to possess distinctive entrepreneurial cognitive abilities which enable them to recognise new commercial business opportunities, disown existing ventures and over time rebounds back to entrepreneurship to create new business in the same or different industry. This SE processes and practices somewhat shape evolution of new industries and in turn helps socio-economic development and growth. These are the main primary reasons for key entrepreneurship thinkers and researchers such as MacMillan (1986), McGrath (1996), Baumol (1990), and Ucbasaran et al. (2008) to call for the focus of the study of entrepreneurship on SE and serial entrepreneurship. Given the growing body of streams of thoughts and related constructs on serial entrepreneurship (Lafuente, et al. 2018; Plehn-Dujuwick, 2010; Saravathy, et al., 2013), it is surprising that there is significant level of ambiguity surrounding the serial entrepreneurial phenomenon. The voluminous research on SE and serial entrepreneurship has scattered across the psychology, natural sciences, and social sciences fields, thus comprehensive review exploring the various aspects of this subject is warranted. Specifically, key aspects such as the nature of SEs, processes and practices, transition processes, and outcomes of the serial entrepreneurial phenomenon lack critical review. As such, the field of serial entrepreneurship is expanding exponential but our understanding of these aspects remains stagnant.

Against this backdrop, we address this knowledge gap by presenting an integrative critical review of serial entrepreneur's antecedents, moderators, transitions and outcomes which significantly contributes to the advancement of the current research. We contribute to the literature by developing a multilevel model of SE, which captures the various philosophical and theoretical aspects. Based on findings of

this review, we argue that progress on SE and serial entrepreneurship research can be through appropriate use of theories, concepts and paradigms or combinations that are more adequate in addressing different level of analysis. This is important because the outcomes of such kind of research would not only have strong theoretical implication but also strong practical and policy making implications. In addition it would also help uncover links between different constructs. Furthermore, our study also contribute to literature by helping researchers from different disciplines such as social sciences, psychologies, and natural sciences to be more aware of the extent to which previous serial entrepreneurial researches are interconnected by theories and philosophical perspectives and serial entrepreneurial debates across different disciplines.

## ***2.0. Historical evolution: Key thinkers and contributors to entrepreneurship development.***

In 1755 Richard Cantillon coined the French term *entreprende* which translates into English as 'entrepreneur'. This seeks to explain and enhanced our understanding of the subject at that particular time period. Researchers have sought to portray entrepreneurs as distinctive group based on their characteristics, functions and roles within society. Historically, there are two divergent trends that co-exist in the entrepreneurship research community (Baumol, 1993). The first stems from the works of Turgot (1766) and Say (1803), who viewed the entrepreneur as someone who creates and develops a new venture, and the second is from the view of Cantillon and Schumpeter, who see the entrepreneur as an innovator whose function impacts economic development and growth. Based on this, there has been three major phases of entrepreneurship development Phase 1 focuses on early classic economist's view of entrepreneurship. The central notion of classical economists view is based on market economy where the entrepreneurs engage in exchange for super normal profits. This early school of thought was given impetus by Cantillon, (1755); Turgot, (1766); Say, (1803), Schumpeter, (1934); Knight, (1921). Phase 2, the second school of thought was influenced by the neo-classical view of entrepreneurship. Neo-classical economists viewed entrepreneurs as economic agents and innovators who combine resources in a novel way to create more added values for the wider society. Phase 3, the recent school of thought, building on the neo-classical view of entrepreneurship views entrepreneurship as a contemporary phenomenon. The contemporary view of entrepreneurship is that the entrepreneur is a creation of organisations and industries. The main notion of the contemporary view of entrepreneurship is that entrepreneurs are engines of socio-economic development and growth. The key conceptual contributors to recent entrepreneurship development include Schults, (1975); Gartner, (1986); MacMillan, (1986); Baumol, (1995); Westhead, et al. (1998, 2005).

## ***3.0. Who is a serial entrepreneur?***

In the entrepreneurship literature entrepreneurs are classified as novice and habitual entrepreneurs. Habitual entrepreneurs can be categorises into two types, serial and portfolio entrepreneurs (Birley and Westhead, 1993; Wright, et al. 1998; Plehn-Dujowich, 2009). These authors describe novice entrepreneurs as those entrepreneurs who create one business venture while SEs create more than one business venture but abandon ownership of the existing venture and over time re-bounds back into entrepreneurship to create new venture in same or different industry. Whereas portfolio entrepreneurs create more than one ventures and simultaneously own and manage all of them. MacMillan, (1986) contend that entrepreneurship researchers need to focus on researching SEs, if we were to understand role of entrepreneurship in socio-economic system. The current serial entrepreneurial research field is fragmented with often conflicting findings which fail to offer a deeper understanding of why and how serial entrepreneurial practices are deemed important. Schaper, et al. (2007) argues that serial entrepreneurship is progressively explored in some detail within the academic community, but the

knowledge base about this phenomenon is still limited. The authors pointed out that the first issue to be address is semantics: what exactly is a serial, habitual, repeat or continuous entrepreneur? This is because different authors have occasionally ascribed different interpretations to each of them

Kuhn (1970) suggested that consensus is required on definitions of what research field is. In addition he argued that scientific advancement is achieved, when the number of alternative explanations in research is reduced. According to Belgrave and Hofer (1991), for a research field to gain legitimacy and impose its presence in the long run, it must start with good definitions and establish its boundaries with other research field. There are definitional problems with regards to serial entrepreneurs. Cohesive epistemological accumulations tend to results in stable advancement of knowledge base. Conversely when knowledge based is not advancing its legitimacy in wider society may be threatened. Low and MacMillan, 1988 strongly argue that entrepreneurship should be defined as a creation of new ventures. Definitional problem of SEs is similar to that of entrepreneurship in general. The definition for SE in the extant literature is vague (Gartner, 1989; Bygrave, 1997) Employing attributes such as risk taking, level of innovativeness and pursuit of opportunity without regard to resources the entrepreneur currently controls to define the entrepreneur generates confusion or leads to tautology (Bruyat and Julien, 2001). Theory of creative destruction and the concept value creation suggest that entrepreneur is an individual or group of individuals who identifies commercial opportunity and exploit it by organizing new combinations of resources to produce more added value or new products and services that align with trends of new technologies and market demand. These indicate that main functions of entrepreneurs are to innovate or revolutionise the systems of production. They remain entrepreneur as long as they continue this function (Schumpeter, 1934). In this paper we adopt the Schumpeterian functional view of the entrepreneur and offers an innovative definition of SE as *flexible creative person who processes distinctive entrepreneurial traits which enable him or her to explore and re-explore macro environments to identify and re-identify business opportunities and make calculated risk decisions to abandon ownership of existing ventures and configure and reconfigure new resources to venture and re-venture in either the same or different industry over time*

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#### **4.0. Scope of the literature review**

Given that entrepreneurship research field is multi-paradigmatic in nature (Shane and Venkataranman, 2000; Zahra and Wright, 2011; Zahra, 2007), a deeper understanding of the nature, dynamics, uniqueness and limitations of the context in which SEs processes and practices occurs is needed. To track and trace relevant literature on the subject, we used past approaches to comprehensive reviews (Oliveira and Lumineau, 2019; Sheng et al., 2017; Short, 2009) and took the following steps illustrated in Figure 1. The first stage was the identification of relevant studies. In order to capture relevant peer reviewed articles, we utilised databases such as the Web of Science, Google Scholar, Scopus and Business Source Premier. We employed key words such as “serial entrepreneur”, “sequential entrepreneur”, “successive entrepreneur”, “comeback entrepreneur”, “bounce-back entrepreneur”, “rebound entrepreneur”, “habitual entrepreneur”, “resilient entrepreneur”, “strategic entrepreneur”, “repeat entrepreneur”, “normand entrepreneur”, “dynamic entrepreneur”, “continuous entrepreneur”, “adept entrepreneur”, “grasshopper entrepreneur”, “entreprenomic”, “spring water entrepreneur”, “drivers of societal change”, “effectual entrepreneur” , “mobile entrepreneur”, “legitimate entrepreneur”, “ industry recycling entrepreneur”, “new industry formation entrepreneur”, “industry innovators”, “institutional logic entrepreneur”, “new venture start-ups know-hows” and “drivers of

corporate strategic renewals” that have been used by past studies to refer to the dimensions of serial entrepreneurship and serial entrepreneurs.

Accordingly, we did not limit the scope of our search to any particular journals or journals ranking system to enable us to offer a more comprehensive knowledge of what we know and need to know about SEs. The next stage was screening followed by eligibility. In line with previous recommendations of search of a dispersed literature across multiple domains (Oliveira and Lumineau, 2019), we employed three Boolean operators such as “and”, “or” and “not” to retrieve, capture and select relevant articles that would be included in this study. The rationale for using Boolean operators is that it helps reduce number of studies outside our scope (Sheng et al., 2017; van Burg and Romme, 2014). Reading the abstracts of the select relevant articles enabled us to identify appropriate articles that are within the boundary of this study. This paper focuses on literature review of the serial entrepreneurial antecedents, moderators and outcomes and the relationship among them. In this study the antecedents were predictors of serial entrepreneurial outcomes. The outcomes are the end results of SEs sequential venture creation practices. The moderators are variables which allow us to understand SEs processes and their practices and how these antecedents are related to the outcomes. The moderators address and describe the conditions under which all the other variables combine to influence serial entrepreneurial sequential processes and practices. This review stresses that prerequisite for all the dimensional SEs processes and practices are human, social and psychological capitals. The main function of SEs is the creation of new economic value such as new venture creations (Grilo and Thurik, 2005; 2008). Therefore deeper understanding of different stages of entrepreneurial processes is vital, in the sense that the drivers and effects are not essentially the same across each engagement stage.

## ***5.0. Classification of SEs; Individual, corporate and institutional***

### ***5.1, Individual SEs***

This literature review uncover that the same entrepreneurs who often exit entrepreneurship over time enter the start-up processes repeatedly. This practice is referred to as revolving door entrepreneurship. Serial entrepreneurial role in society are deemed important to the economy because they drive the evolution of industries and new markets. Serial entrepreneurship occurs when an entrepreneur discontinues his or her ownership of a venture due to either venture success or failure, and over time rebounds back to sequentially re-start a new venture in the same industry or a different industry (Westhead, et al. 2005; Hyttinen and Ilmakunnas, 2007).

#### ***5.1.2. Corporate SEs***

Corporate entrepreneurship is the process in which a firm deploys new resource combinations to extend the business operations in areas unrelated, or marginally related to current competence base and corresponding opportunity set (Burgelman, 1983). Serial corporate entrepreneurs are individual or group of managers in an organisation who repeatedly deploys new combination of resources to generate new production processes resulting in internal corporate ventures, and as a result gain direct ownership stakes in the organisation via stock options or direct ownership in the subsidiary in the larger organisation for which they work. (Westhead and Wright, 1998; Block and MacMillan, 1993; Guth and Ginsberg, 1990) This study defines corporate serial entrepreneurship as dynamic entrepreneurial behaviour within an existing organisation which ultimately helps the organisation to renew its strategies and knowledge base over time

#### ***5.1.3. Institutional SEs***

Institutional arrangements are important to the survival of new ventures because its function is to minimise uncertainty by conferring legitimacy. Institutional entrepreneurs seek to address the challenges of change in institutional fields because they reintroduce agency, interests and power into institutional analyses of organisations. Institutional entrepreneurship refers to actions of particular entrepreneur or group of entrepreneurs who leverage new resources to create new institutions or transform existing institutional (Jespersen, 1991; Maguire, et al. 1988, 1991, 2004; DiMaggio, 1988, 1991). An institution is considered as performance scripts which offer steady policies for regularly repeated activity sequences. (Hoffman, 1999) Institutions environments are self-reproducing recurrent patterns of behaviour where an organisation exists (DiMaggio and Powell, 1991). Institutional entrepreneurship occurs when a person or group of people work to drastically change an institution, and in the process form a new institution (Fligstein, 1997). Based on this analysis, institutional SEs in this paper is refers to an experience agent or agents within an institution, who possess dynamic abilities to marshal, configure and reconfigure sufficient knowledge and resources which enable them to act strategically to bring about change in institutional arrangement

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## ***6.0. Key findings of the antecedents***

This literature review uncovered that social and human capital elements such as networking and prior entrepreneurial experiences appears to be the most valuable key antecedents in all levels of serial entrepreneurial sequential process and practice. Social networks help SEs with access to appropriate complementary resources (Stam, 2010; Lin, 1999; Lechner and Dowling, 2003). Prior entrepreneurial experience helps reduce uncertainties and risk (Ucbasaran et al. 2008). The antecedents are taken to be the predictors of the serial entrepreneur's instrumental motivations, processes and practices outcomes. The perception is that stronger human, social and psychological capitals are crucial for entrepreneurial motivations and successful outcomes of new venture creations. This means that SEs motivations and moderators influence each other to shape the outcome of SEs processes and practices. Some researchers in entrepreneurship literature distinguished four main approaches to new venture creation, these includes environmental influence, characteristics of the entrepreneur, the processes leading to the new venture creation, and type of venture they create (Chell, et al., 1991; Dess, 1996; Palich and Bagby, 1995; Baron, 1998; Gartner,1985). Other researchers describe three major processes which include opportunity identification, opportunity authentication, development and implementation, and resources deployment (Alvarez and Busenitz, 2001; Ardichvili et al. 2003; Eckhardt and Shane, 2003; Blank, 2013b; Ries, 2011).

## ***6.1. Analyses of SEs antecedents***

The entrepreneurial antecedents' level which motivates each level of SEs varies. Individual SEs possesses higher levels of human, social and psychological capital. These capabilities enable individual SEs to take higher risk under uncertainty and learn generatively (Cope, 2005; Keith, et al. 2016). Corporate SEs and Institutional SEs tend to be collective in which entrepreneurial outcomes are for common good within the existing organisation and institutions. Level of generative learning influences this multi-level SEs, outcomes and their overall knowledge base. This means that more the SEs engages in generative learning, the more their entrepreneurial abilities develop and grow. With this respect this paper contend that in-depth comprehensive multi-paradigmatic methodologies are required to gain deeper understanding of the nature and the meaning of heterogeneity of serial entrepreneurial phenomenon and their valuable contribution to socio-economic development. Such understanding would help develop serial entrepreneurial knowledge base within the field of



entrepreneurship in social science. The patterns of the findings revealed in this study are in line with those of many prominent serial entrepreneurship researchers. Most research into serial entrepreneurial phenomenon to date has employed qualitative case research methodology; this makes it difficult to generate valid generalizable findings. (Alsos and Kovereid, 1998) When quantitative methodologies have been employed, the data and subsequent analysis have frequently been so highly aggregated that detailed information about SEs has been difficult to ascertain (Wright, et al. 1998) Most entrepreneurship studies publish in leading journals employed positivism approach using hypotheses testing, inferential statistics and internal validity (Hoskisson, et al. 2011; Welter, 2011) These findings shows how SEs knowledge base in the entrepreneurship literature is expanding but not growing.

This study uncovers that many serial entrepreneurial researchers assume that there is a positive relationship between the experiential knowledge of the SEs and the exploitation of opportunities (Wright et al 1998; Chen, 2013). However, Parker (2014) contradicts this believe by arguing that portfolio entrepreneurs possess higher abilities in entrepreneur experiential knowledge, opportunity identification and exploitation. Parker (2010) also argues that knowledge generated from previous venture experience help entrepreneurs to performance better on re-ventures. The inconsistencies in the findings of serial entrepreneurial research show how existing knowledge base is fragmented and diverge in extant literature. Rerup, (2005) pointed out that past entrepreneurial experience does not necessarily warrant success in future business ventures and that it is a misperception that experienced entrepreneurs are always more successful than beginners. Stam, et al. (2006) suggests that learning from prior venture experience has a positive link on serial entrepreneurial performance. These findings seem to be more descriptive and comparative in nature and as consequences appear to be inconsistent. Based on this findings, we are argues that although the field of serial entrepreneurial research is expanding, it is not enhancing our understanding of this pivotal phenomenon. Hence stagnation of serial entrepreneurial knowledge base advancement Table 1 provides summary of studies on the antecedents.

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### ***6.1.2. Key findings of SEs transition process***

This review found that specific institutional logic is the main key factor to SEs transition. Baker, et al. (2005) pointed out that institutional problem that SEs encounter may be constraint their abilities to explore and exploit entrepreneurial opportunities. The transition process refers to the dynamic contexts of seral entrepreneurship and the processes of new venture creation. Bygrave and Hofer (1991) states that the transition processes comprised of all the performing activities from pre-venture creation, venture creation and post venture creation. This means entrepreneur's learning, un-learning and re-learning, decision-making processes, social networks, recognition and evaluation of opportunities and strategies relative to specific conditions of the environments, resources deployments and the final creation of the new venture in the same or a different industry. The serial entrepreneurial moderators were variables which enable researchers to understand SEs processes and practises, and how the antecedents relate to the entrepreneurial outcomes. Moderators are mediators that address and describe the conditions under which the antecedents impact on serial entrepreneurship over time. Table 2 outlines studies on serial entrepreneurship focusing on the transitional process and variables.

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### **6.1.3, Key findings of SEs moderators**

Entrepreneurial environmental conditions and dynamic entrepreneurial learning appears to be the key moderators because they foster serial entrepreneurial processes and practices. New venture creation is evolutionary process (Gartner, 1985). Based on this review a moderator refers to the relationship between antecedent and outcomes of multi-level dimensions of SEs processes and practices. The perception here is that the relationship between SEs antecedents and outcomes is stronger when moderators such as dynamic entrepreneur learning increase. Davidsson, et al. (2006) noted that entrepreneurial exit could be an indicator of entrepreneurial learning and its effect on entrepreneurial re-venture. According to Hyytinen and Iimakkunnas, (2007), the aspiration and ability to implement ideas make serial entrepreneurs unique. This suggests the importance of the antecedents of serial entrepreneurship. Antecedents are entrepreneur's psychological, social and human capitals that positively shape all the sequential stages of new venture creation. Vaillant and Lafuente, (2018) building on insights from the generative entrepreneurial learning process and the cognition theories, argues that, irrespective of whether entrepreneurial experience is positive or negative, entrepreneurial experience enhances cognitive plans of SEs leading them to greater reported innovativeness. Generative process of entrepreneurial learning integrates previous and present learning experiences which in turn enhances the entrepreneur's behaviour and venture creation intentions. Human capital antecedents such as learning experiences enable SEs to understand and effectively manage entrepreneurial processes and practices (Keith, et al. 2016; Junni, et al. 2013; Cope, 2005) Ability of a new venture to appropriate benefits and avoid risk is contingent to the resources that the entrepreneur can marshal, configure and reconfigure for their venture (Peer and Vertinsky, 2008).

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### **7.0. Key findings of SEs outcomes**

New venture creations and new institutional arrangements are the direct or indirect outcomes of SEs processes and practices (Gartner, 1985). The outcomes refer to the end results of serial entrepreneurial dynamic processes and practices over time. The outcomes of each specific level of SE are shaped by the interplay between antecedents and moderators. This means that variations in serial entrepreneurial outcomes may be due to the extent of relationships between the antecedents and the moderators. The commonality of the definition of SE is that SEs repeatedly disown venture and sequentially create new ventures. The outcomes of the dynamic serial entrepreneurial processes and practices are human social and cognitive capabilities development. These entrepreneurial resources are crucial for dynamic SEs processes and practices because it may lead to know how in sequential new venture creation and new markets penetrations.

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## ***8.0. Discussion and implications***

In seeking to understand the current state of serial entrepreneurial research domain, the purpose of this paper was to review and synthesis the extant literature of serial entrepreneur's antecedents, moderators and outcomes to uncover knowledge gaps and the state of serial entrepreneurial research. This review uncovered that serial entrepreneurial research field is fragmented which hampers knowledge development. Based on this integrative critical review of the current state of knowledge base in the entrepreneurship literature, we develop a framework linking the antecedents, moderators and outcomes to help enhance understanding of SEs processes and practices in diverse entrepreneurial context.

Although SEs processes and practices have gained considerable attention in academic communities, previous research findings have been fragmented, dispersed and often conflicting thus failed to generate substantiated theories that can advance serial entrepreneurship knowledge-base in entrepreneurship literature. This paper also uncovered that the research methodology and the findings are fragmented which make it difficult to advance SE knowledge base. SEs research should gear towards contextual issues and SEs processes and practices to generate deeper understanding and meaning of this pivotal phenomenon. In addition SEs researches should employ robust; in-depth, multi-dimensional and multi-paradigmatic theories which are capable of yielding findings that would have strong theoretical and practical implications. What are desirable in entrepreneurship are not only impactful research findings which are capable of moving the existing theoretical knowledge-base of serial entrepreneurship to the next level, but also entrepreneurship researches that can have strong and positive impacts on practice, and are convincing and persuasive in policy decision making. We present a summary of what we need to know based on the knowledge gap uncovered.

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## ***8.1. Contributions and directions for future research***

The study makes key contributions to serial entrepreneurial research. First, despite of the growing interest of SEs processes and practices in both academic and non-academic communities, there is limited comprehensive serial entrepreneurial literature review that enhances our understanding of the state of the field of this pivotal phenomenon, and addresses knowledge gaps that need to be bridge in order to advance serial entrepreneurship knowledge base in the literature. In addition, there has been inadequate employment of an in-depth multi-level approaches to the study of serial entrepreneurship in the literature. This study can be used to develop training workshops, educational programmes to instil serial entrepreneurial knowledge among next generation of SEs in ever-changing entrepreneurial environments. This study may also help policy makers to craft policies that encourage and foster SEs processes and practices in societies.

Serial entrepreneurial phenomenon is multidimensional. This means that it requires multilevel analysis of individual, corporate and institutional SEs in order to capture the bigger picture of this pivotal phenomenon. There is a need for researchers to think more comprehensively by casting a wider conceptual or theoretical net and employ variety and innovative multidiscipline approaches. This is because no single framework can explain the entirety of heterogeneity and complexity of serial entrepreneurial phenomenon. Future studies should extend this study by focusing more on serial entrepreneurs' dynamic learning, opportunities identification, opportunity selections, decisions making and new venture's start-up processes. In addition, future research may focuses on how and why SEs

sequential processes and practices contribute to economic development and societal change. The context in which previous research on serial entrepreneurial phenomenon was conducted was largely developed economies contexts. This limits the transferability of the findings to developing economies contexts, and so future literature reviews and syntheses should build on this study by examining the drivers of SEs processes and practices in developing economies context and compare the outcomes to those of developed economies context. In sum this comprehensive review has laid solid foundation for advancing the serial entrepreneurial knowledge base in the literature by promotes theory development and makes aware where critical knowledge gaps exist. In addition it also uncovers and pinpoints areas where future researches need to focus more on serial entrepreneurial research. We hope that the insights derived from this review will motivate future serial entrepreneurial researchers to carry out research that bridges the gaps and advances our serial entrepreneurial knowledge.

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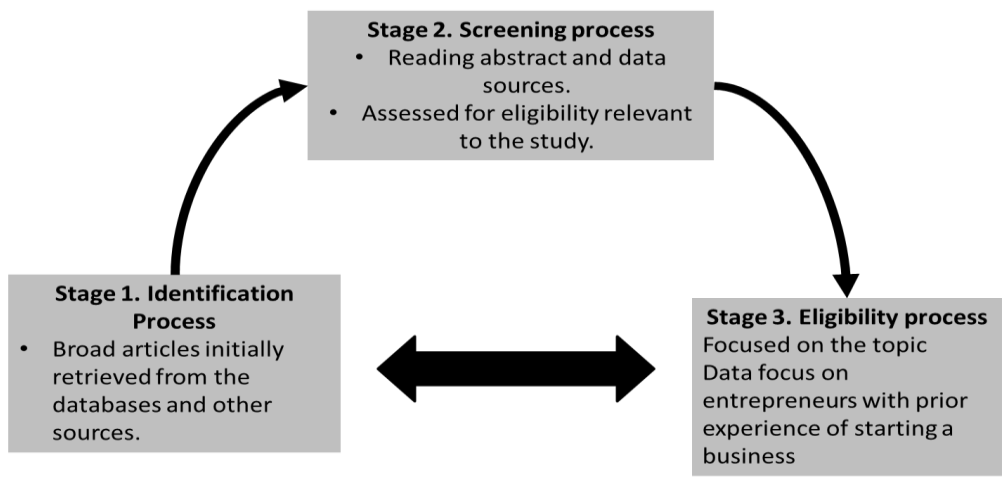


Figure 1: The iterative processes of literature reviewed employed

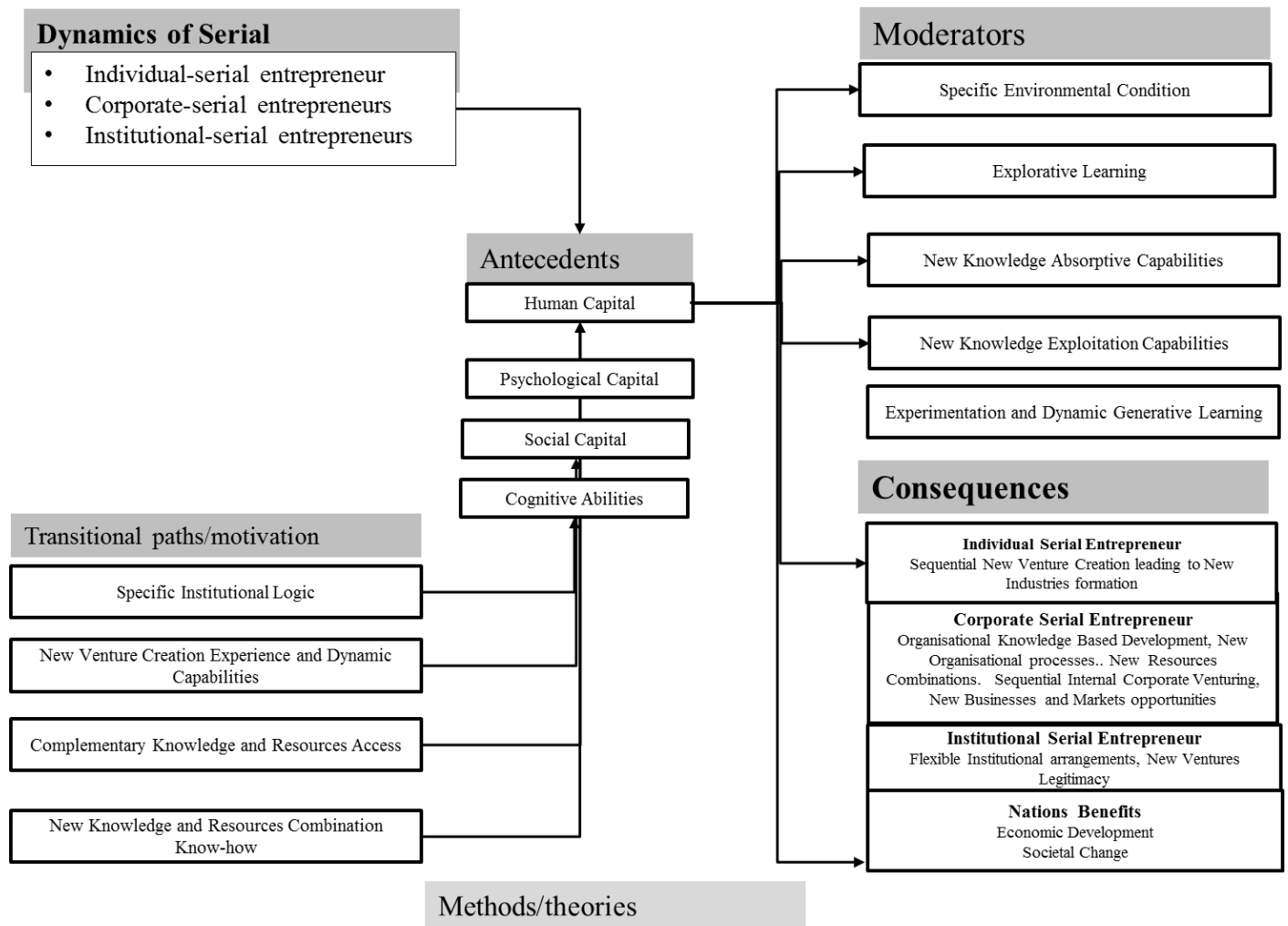


Figure 2: Dimensions of SEs and key antecedents, moderators and outcomes.

Table 1: Summary of studies on the antecedents

Authors	Theoretical lens	Data sources	Key Findings
Sarasvathy, et al. (2013)	A. macroeconomic perspective	Secondary data	Entrepreneurs take advantage of organisations as instruments to enhance the chances of their own venture success.
Tihula and Huovinen, (2010)	Experiential learning theory.	Questionnaire survey dataset	Management teams are common in the ventures owned by habitual entrepreneurs compared to novice entrepreneurs.
Chen, (2000)	Fixed-effects and IV estimations	Longitudinal survey dataset	Selection on ability is core determinant of SE venture and early performance of new start up.
Malmström, (2015)	Repertory grid	Secondary survey dataset	Entrepreneurs cognitive are distinct and complex in constructing high business models compared to constructing low business models.
Lechner, et al. (2016)	Social Capital	Case studies interview data	Variation in social capital influence serial entrepreneur's opportunities identification and implementations.
Sautet, (2013)	Baumol's theory of productive and unproductive entrepreneurship	Secondary dataset	The allocation of entrepreneurial activities between productive and unproductive entrepreneurship are influence by payoff structure.
Mohr and Gamsey, (2015).	Penrosian growth theory	Longitudinal survey dataset	SEs benefit from venture capital and intergenerational learning.
Gultst and Maritz, (2011)	Practice-based theories	Survey data set	Venture fails not the entrepreneurs and so failure is not view in negative context by entrepreneurs if they learn from the experience.
Presutti, et al. (2008)	International entrepreneurship (IE) approach	A longitudinal case study	No negative impact of prior experience on SE re-ventures.
Hsu et al. (2017)	Prospect theory and self-efficacy. hypotheses	Survey data set	Positive relationship between perceived financial performance and intention to re-enter.
Karra, et al. (2008)	Evolutionary economic theory	Qualitative case study dataset	International entrepreneurship is shape by international opportunity identification, institutional bridging and capacity for cross-cultural relationship.

Table 1: Summary of studies on the antecedents

Authors	Theoretical lens	Data sources	Key Findings
Raisch and Birkinshaw, (2008)	Organisational ambidexterity	Secondary Dataset.	Successful ventures are ambidextrous, adaptive to dynamic environments and efficient in management.
Wright, et al. (1997).	Venture capitalist perspectives	Questionnaire survey dataset	Variations in venture capitalists preferences to SEs in respect to business ownership experience.
Simmons et al. (2016)	Regulatory fit theory	Two case studies and cross sectional survey	Found that those prevention-focused entrepreneurs are less likely to become serial entrepreneurs.
Aamankwah-Amoah, (2017).	A conceptual model of fostering serial entrepreneurial development	Secondary data from the literature reviewed and Case studies Methods.	Stigmatisation, fear of failure, and lack of national policy seems to be barriers to serial entrepreneurial practices.
Podoyntsyna, et al. (2011)	Cognitive appraisal	Secondary Survey dataset	Emotional reactions of entrepreneurs on strategic issues change substantially as entrepreneurs become habitual.
Parker, (2014)	Occupational choice framework	Case studies approach	SEs out-perform novices because maximum of a large number of random draws dominate one initial draw.
Zhang, (2011)	literature data	Secondary survey database	Entrepreneurs with venture-backed founding experience gain access to venture capital faster than novice entrepreneurs.
Anokhin, et al. (2008)		Cross-sectional survey dataset	Positive relationship between the entrepreneur's experience and the prospect of starting more than one venture.
Westhead, et al.(2004)	The entrepreneurial process theory,	Cross-sectional survey dataset	Portfolio entrepreneurs have diverse resources and offer s attractive growth prospects than other entrepreneurs.
Cumming, et al. (2016)	Jack-of-all-trades theory	Secondary survey data	Entrepreneurs are likely to become SE where the entrepreneurs have prior experience.
Schaper et al. (2007)	Descriptive statistics and exploratory analysis	Survey dataset	SEs are more likely want to re-venture their business in future.

Li, et al. (2008)		Survey Dataset	Experienced entrepreneurs are better at developing networks and managing organizations than novices.
Alos and Kolvereid, (1998)	Theory of organizing,	Survey dataset	Parallel entrepreneurs have higher likelihood of venture implementation than novice and serial founders.
Block, et al. (2017)	Literature review	Secondary dataset	Regional environments and clusters have an influence on the innovation activities of entrepreneur start-ups.
Amaral, et al. (2011)	Human capital theory.	longitudinal survey dataset	Speed with which individuals re-enter entrepreneurship is fundamentally related to general and specific human capital.
Manuela, et al. (2008)	International Entrepreneurship Approach	Based on a longitudinal case study	Serial entrepreneurial experiences could substitute for lack of knowledge, opportunity recognition and social networks.
Gompers, et al. (2006)		Secondary survey datasets	Successful SEs are more likely to replicate the success than SEs who failed prior venture.
Schutjens, and Stam (2006)	An intentions-based model of new firm formation	A longitudinal survey dataset	Entrepreneurs who recall their business management experience positively are likely to harbour restart intentions.
Kolvereid and Isaksen, (2006)	Theories of reasoned action and planned behaviour	Questionnaires survey dataset	Salient beliefs define attitude and intentions to become self-employed.
Hessels, et al. (2011)		Secondary survey dataset	Males have higher probability of entrepreneurial engagement after exit.
Vaillant and Lafuente, (2018)	Binary Choice Models.	Survey dataset	SEs with process agility show superior export propensity levels than entrepreneurs without process agility.
Urban, (2009)		Cross-sectional survey dataset	SEs exhibit opportunity recognition behaviours relative to novice and portfolio entrepreneurs.
Seet, (2007)	Paradoxical dilemma-based framework	Multiple case study and survey dataset	SEs possesses venture development capabilities than novice and portfolio entrepreneurs.
Tervo, (2015)		Longitudinal data set	Entrepreneurs creating new ventures in later often Habitual entrepreneurs.

Wiklund and Shepherd, (2017)	Human, Social Capital and Resource-based theory	Survey dataset	Habitual entrepreneurs tend to organise subsequent act of portfolio entrepreneurship by creating another new ventures.
Buttice, (2017)	Social Capital theory	Secondary survey dataset	SEs are more successful than novice because of the social capital developed in previous operations.
Wright, et al. (2017).	Asset Complementarity Perspective, Human Capital and Social Capital	Survey data set	Repeat entrepreneurs seek complementary academic and commercial assets in their location decisions.
Wei and Bin, (2008)	Human Capital Theory	Questionnaire survey dataset	Industrial experience may have negative impact on entrepreneurship.

Table 2: Summary of studies on serial entrepreneurial phenomenon focusing on transition variable

Authors	Theoretical lens	Data sources	Key Findings
Plehn-Dujowick, (2010).	An occupational choice model and survival equation.	Secondary survey dataset.	Higher skilled entrepreneur disown low quality business venture to become serial entrepreneur.
Tran, et al. (2017)	An occupational choice model.	Secondary survey dataset.	SE possesses higher human capital relative to other entrepreneur.
Eggers and Song, (2015)	Behavioural theory and decision making theory.	Secondary cross industry survey dataset.	Unsuccessful SEs are likely to blame external environment and change industries for subsequent venture.
Wright, et al. (1997)	Discovery-oriented approach.	Case studies.	Serial entrepreneurs' motivations and type of venture varied between the first and subsequent ventures.
Bair and Morrison, (2005)	Labour economics and theories of industry dynamics.	Secondary survey dataset.	Human and start-up capital have a positive effect on the survival of business venture.
Ucbasaran, et al. (2011)	Over optimism theory.	Secondary survey data.	SEs who start-up ventures at a time are different breed. Their over optimism remains undimmed by failure.
Parker, (2013)	Theories of entrepreneurial learning by doing and resource acquisition.	Longitudinal survey dataset.	Serial entrepreneurs' temporary venturing benefits impact on one venture into subsequent ones.
Lafontaine and Shaw, (2016)		Longitudinal survey dataset.	Prior business experience increases the longevity of subsequent business.
Westhead, et al. (2003)	Resource-based theory.	Case studies.	Portfolio entrepreneurs have more diverse experiences and more resources than either serial or novice entrepreneurs.
Rocha, et al. (2015)	Empirical strategy based on continuous time duration models with selection.	Longitudinal data set.	Serial entrepreneurs' self-selection overestimates learning by doing effects.
Lin and Wang, (2017)	The entrepreneurial Intention model.	Case studies and survey dataset.	Larger the failure the slower re-ventures speed. Relationships exist between serial entrepreneur's ages and re-venture speed.
Kirschenhofer and Lechner, (2012)	Growth Theory of entrepreneurial firm.	Secondary survey dataset.	The degree of experience of SEs matters. More experience is better.
Hyytinen and Ilmakunnas, (2007)		Cross-sectional survey dataset.	Entrepreneurial aspirations is more associated with become entrepreneur.
Thorgren and Wincent, (2015)	Dualistic model of passion.	Survey dataset.	Obsessive passion is associated with habitual entrepreneurship, harmonious passion is not.



Westhead, et al. (2005)		Secondary survey dataset.	Portfolio entrepreneurs have considerable resources compared to serial or novice entrepreneurs.
Carland, et al. (2000)		Secondary questionnaires survey dataset.	Multiple venture entrepreneurs possess psychological characteristics.
Giannantonio and Hurley-Hanson, (2016)	Psychology and sociology theories of entrepreneurship.	Survey dataset.	High-tech entrepreneurs experienced early failures.
Jeen and Hishamuddin, (2008)	Human capital theory.	Survey questionnaire dataset.	Entrepreneurial experience impact on entrepreneurialism of novice, serial and portfolio.
Barnit, (2014)	Learning theory.	Survey dataset.	First business start-up serves as springboard of learning entrepreneurial specific skills.

*Table 3: Summary of key studies on moderating variables*

Authors	Theoretical lens	Data sources	Key Findings
Nielson and Sarasvathy, (2016)	Economics of entrepreneurship	Longitudinal survey dataset	Entrepreneurs who have failed with their first business are more likely than successful entrepreneurs to re-enter entrepreneurship.
Coleman, et al. (2013)	Resource-Based View	Secondary longitudinal survey data set	Entrepreneur's ability to provide, mobilize and acquire needed resources contributes to the firm's competitive advantage, success and survival.
Gruber, et al. (2008)	Learning, innovation and resource-based theory	Questionnaire survey data set	SEs generate choice set of alternative market opportunities before deciding which one to pursue in their new venture.
Prescott, et al. (2016)	Entrepreneurial ecosystem perspective	Primary dataset	The ecosystem provides entrepreneurs an environment conducive to continued entrepreneurship.
Sambharya and Musteen, (2014)	Generalized least square (GLS) regression model	Secondary survey dataset	Normative and cognitive dimensions of institutional theory are predictors of necessity and opportunity-driven entrepreneurial activity across countries.
D'Souza and	Cognitive Psychology	Survey dataset	Prior venture experience do not play role in differentiating novice and

Kemelgor, (2009)	theory		serial entrepreneurs.
Cassar, (2014)		Longitudinal survey data	Industry experience leads to greater accuracy and less overoptimistic bias in entrepreneur expectations.
Rosa, (1998)		Case studies	Variations exist between habitual entrepreneur's ventures strategies, motivations, and management practices, social and business networks.
Michi, (2015).		Case study	Serial entrepreneur's spin-offs help in cluster formations.
Sserwanga, and Rooks, (2014)	Attribution theory	Cross-sectional survey dataset	Repeat entrepreneurs who attributed previous venture failure to an internal and stable reason were found to be less successful in subsequent venture.
Seok-Woo and Ruef, (2017)	The theory of organisational imprinting	Longitudinal survey dataset	The diminution of the imprinting effect for SEs could be ascribed to learning with experience.
Mandl, et al. (2015)	Qualitative Comparative Analysis	A case study approach	Locus of causality, controllability, and stability are main reason behind novice, serial, and portfolio entrepreneur's subsequent behaviour after business failure.
Basu and Virick, (2013)	Social network theory	A cross sectional survey dataset	Serial entrepreneur's exhibits higher aspirations embedded diverse social networks, and better performance than novice entrepreneurs.
Fu, et al. (2018)	Multilevel logit models	Survey dataset	Labour market regulations have a positive influence on the decision to re-venture into entrepreneurship.
Bengtsson, (2013)		Secondary data set	Venture capital firms often discontinue relationships with serial entrepreneurs; prefer firms with severe information problems.
Osnabrugge, (1998)		Mixed method. dataset	Serial angels limit their investments more to industry sectors in which they have personal experience.
Tran, et al. (2017)	Occupational choice and Survival models	Secondary survey dataset	Higher level of human capital together with high-quality business is related to higher possibility of become serial or portfolio entrepreneur
Rerup, (2005)	Behavioural Learning Theory, and Theories of Mindfulness	Literature review	Entrepreneurs' use of prior venture experience can both help and harm their chances to discover and exploit entrepreneurial opportunities.
Robson, et.al. (2012)	Human Capital Theory	Survey dataset	Prior venture ownership experience is a key resource relating to the ability to introduce innovations into the market.
Baron and Ensley, (2006)	Prototype theory. A Cognitive Model of Pattern Recognition	Survey questionnaires Dataset,	Opportunity recognition is associated with pattern of recognition frameworks. Novice or serial entrepreneur's cognitive frame varies.

*Table 4: Summary of key studies on serial entrepreneurial phenomenon and outcomes*

Authors	Theoretical lens	Data sources	Key Findings
Sarasvathy, et al. (2013)	A. macroeconomic perspective	Secondary data	Entrepreneurs take advantage of organisations as instruments to enhance the probabilities of their own venture success.
Tihula, and Huovinen, (2010)	Experiential learning theory.	Questionnaire survey dataset	Management teams are common in the ventures owned by habitual entrepreneurs compared to novice entrepreneurs.
Chen, (2000)	Fixed-effects and IV estimations	Longitudinal survey dataset	Selection on ability is core determinant of SE venture and early performance of new start up.
Malmström, (2015)	Repertory grid	Secondary survey dataset	Entrepreneurs cognitive are distinct and complex in constructing high business models compared to constructing low business models.
Lechner, et al. (2016)	Social Capital	Case studies interview data	Variation in social capital influence serial entrepreneurs' opportunities identification and implementations.
Sautet, (2013)	Baumol's Theory of Productive and Unproductive Entrepreneurship	Secondary dataset	The allocation of entrepreneurial activities between productive and unproductive entrepreneurship are influence by payoff structure.
Mohr and Gamsey, (2015).	Penrosian growth theory	Longitudinal survey dataset	SEs benefit from venture capital and intergenerational learning.
Gultst, and Maritz, (2011)	Practice-based theories	Survey data set	Venture falls not the entrepreneurs and so failure is not view in negative context by entrepreneurs if they learn from the experience.
Presutti, et al. (2008)	International entrepreneurship (IE) approach	A longitudinal case study	No negative impact of prior experience on SE re-ventures.
Hsu, et al. (2017)	Prospect Theory and Self-Efficacy. Hypotheses	Survey data set	Positive relationship between perceived financial performance and intention to re-enter.

Karra, et al. (2008)	Evolutionary Economic Theory	Qualitative case study dataset	International entrepreneurship is shape by international opportunity identification, institutional bridging and capacity for cross-cultural relationship.
Lechner, et al. (2016)	Social Capital	Case studies dataset	SE make more radical, riskier choices and acknowledge the inherent uncertainty in the new venture.

*Table 5: Summary of what we know and what we need to know*

Key dimensions	What we know	What we need to know
Antecedents	Social capital and human capital and psychological abilities	Relationship between antecedents, SE processes and practices.
Transition	Generative and experiential learning and experience	Entrepreneurial contextual conditions. Links between dynamic learning processes and opportunity identification. Multidimensional analysis Drivers of sequential venture creation. Timing of new venture creation.
Moderators	Entrepreneurial orientation, generative learning	How and why does social structures and institutional arrangements foster or constraint sequential venture creation in dynamic environment.
Theories	Commonly employed theories include human capital, social capital cognitive ability	Multi-paradigmatic approach, What constitutes substantial theories? What theory is and what theory is not in relation to serial entrepreneurial research.
Data Sources	Questionnaires survey dataset, secondary data base sources.	Rich in-depth primary data. Primary Longitudinal dataset. Appropriate primary data collection method capable of yielding meaningful findings.