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IMPORTANCE OF SELECTING RELEVANT METHODOLOGY IN SOCIAL SCIENCES

Original
Research

Keywords

*Research methodology;
Exploratory research;
Research design;
Data collection;
Data analysis;
Parallel convergent method;*

Abstract

Research is a continuous process which is not limited only with collecting information and portraying it. On the contrary, behind the concept of research lies creation of novel knowledge, which is a result of finding answers to the questions that were neglected before. Since a good research is defined with its clear objectives and validity of findings, it is crucial to consider factors, such as opting an appropriate research methodology and approaches, design and methods for data collection and analysis, ethical issues and obstacles, that can affect the quality of research. Reflecting a continuum of ongoing research process in evaluating performance of SME's in Azerbaijan, this paper will cover issues which were encountered during the process and scientific approaches to find answers for the questions of the research.

INTRODUCTION

Research can be defined in various ways depending on the contexts it is done. Generally, the main purpose of the research is to observe the phenomena, discover and analyze the relationships that exist between certain antecedents and consequences, and find the answer to the questions that has not been examined in the literature before. It is characterized as process that collects information, it is systematic and accurate, logical and objective, and its outcomes are presented attentively. The very most initial step in starting the research is identifying the problem, that meets the criteria such as: novelty, importance in the field, availability of data and method, required equipment, availability financial sources, time factor, motivation and curiosity towards the problem. In order to find an effective solution for the arisen problem also depends on the approach of the researcher, his or her experience and knowledge, and ability to detect and differentiate specific indicators. Subsequently, takes place the review of literature. The purpose in doing literature review is supporting in developing of conceptual framework, getting familiar with state-of art, determining significance of the problem and discovering the definition, limitations (Singh, 2019). The next step that literature review leads, is choosing the suitable research methods and methodology.

Research approaches, which are the main components of methodology, are divided into three, qualitative, quantitative and mixed approaches (Chih-Pei and Chang, 2017). The nature of the problem is the main factor that determines which kind of method and methodology to select to conduct the research. Thus, the core of the process for choosing the methodology is the social phenomena that is expected to be studied (Noor, 2008).

This paper is dedicated to give an overview of a currently continuing research process and its methodology, that is based on Azerbaijan. The research studies small and medium entrepreneurship, factors that influence their performance, and definition of performance that is interpreted by entrepreneurs. The objective of this paper is to define which methodology and methods is the most appropriate to use, how the data collection and analysis should be performed, and what were the limitations and barriers for the research.

LITERATURE REVIEW

Used by Plato and Aristotle, later on redefined by Thomas Kuhn, paradigm is the “conceptual network” that functions as a guide in research. It provides researchers an orientation, research

methods and techniques while designing their research. Historically, research in social sciences are formulated with three basic questions: Ontological question: question of ‘what’, epistemological question: the correlation between ‘who’ and ‘what’, methodological question: question of ‘how’, and they are interpreted differently based on three approaches of paradigm (Corbetta, 2003). Table (1) below describes briefly their interrelation:

Grix (2002) explains the relationship of five main stages of research in a hierarchical order, depicted in Figure (1). He brings a special attention on differentiation of ontology from epistemology, as they are separately distinctive parts of research by their natures. Next step, selection of methodology is defined as the logic of scientific investigation, hence is followed with methods. The methods and sources in their turn, serve for the acquisition of aimed results.

Methodological question ‘how’, is the driver of two main approaches in research methodology, that are defined as qualitative and quantitative. Quantitative research is originated from neopositivist paradigm, that aims to prove a formerly created theory with empirical data, which is structured. On the other side, qualitative research, which is a result of interpretive paradigm, is more broad, unstructured and does not include previously set theoretical frame. The main focus of this approach is to find more comprehensive answers to the questions though empirical data, and the theoretical justification is in the second place (Corbetta, 2003). Creswell (2017) introduces relatively new approach, mixed methods. Carrying the patterns of both qualitative and quantitative methods, it is derived from Pragmatic approach of paradigm. Pragmatic approach is expected to bring a “revolution”, while focusing on historical, political and social actions of varied groups to create a wider knowledge about the root reasons of the problems. Hence, application of mixed methods is regarded as a suitable method for this approach.

According to Fowler (2013) survey is a non-experimental design for qualitative research and it provides numeric depiction based on the responses of examined sample groups. In this method, the participants should perform cognitive tasks: question interpretation, response formulation, and communication, when they respond to the questions. The restraint for this method is the lack of provided options, which may trigger the respondent to answer within predefined limits (Glasow, 2005). Experimental research, on the other hand, is a second type of quantitative research design, and it is performed though experiments on different groups to compare and analyze an effect of certain factor on the consequences (Keppel, 1991).

Creswell (2017), classifies four types of qualitative design: narrative research, phenomenology,

grounded theory, ethnographies and case studies. Narrative research is based on the stories that are told by individuals referring to their life experiences. Adoption of interviews, with philosophical and psychological background, in order to determine the influence of certain phenomena on different participants, is the characteristic of phenomenological research. Grounded theory, which possesses several opposing definitions by researchers, comprised of several steps of data collection, and contributes to the literature with a novel theory (Dunne, 2011). Ethnography is mainly applicable for social sciences. The observer is closely participating in the research, collects day to day patterns of the activities of people in order to understand their behaviors and reasons behind them (Brewer, 2000). Noor (2008) states that, case studies are the most appropriate tools, if there is a need for in-depth knowledge on specific context. It provides the researcher with holistic opinion of particular case, lets to do generalizations since several cases for final conclusions. However, disadvantages such as absence of thoroughness and reliability are also noted.

Creswell (2017) proposes three form of mixed methods: Convergent parallel, explanatory sequential and exploratory mixed methods, subsequently, these models can lead a creation of more progressive mixed method, transformative mixed method. Table (2) below, demonstrates summary of these first three methods.

METHODOLOGY

This study examines the performance of SMEs in Azerbaijan, Baku, as SMEs become the main focus of the economy. However, the value added and employment contribution of SMEs are low at 9.9% and 37.2% respectively due to the lack of knowledge in this area. This study is therefore expected to provide comprehensive knowledge on the definition of performance, its indicators, goals and the application of performance measurement systems to achieve targeted performance (Statistical publication, Baku, 2021).

The dependent variable in this study is performance, and the independent variables are the financial and non-financial measures of performance. Customer satisfaction and employee satisfaction are given more weight as they are the most frequently cited metrics in the literature. The implications of applying BPMS and considering the economy for the common good are also analyzed. Research begins with a theoretical literature review, leading to the formulation of questions and hypotheses. Therefore, the following research questions and related hypotheses have been formulated to support research.

1. Does SME's in Azerbaijan, Baku have organizational goal?
2. What kind of indicators are used to measure performance?
3. What kind of measurement systems are used to measure performance?
4. How important is employee and customer satisfaction as a factor of performance?

Hypothesis 1: Those SMEs can measure performance, which has organizational goal.

Hypothesis 2: Financial indicators are more commonly used than non-financial indicators.

Hypothesis 3: SMEs in Baku are not applying business performance measurement system.

Hypothesis 4: Employee and customer satisfaction as an indicator of performance are neglected by SMEs.

As an appendix, influence of Common Good factor is also planned to be examined.

5. Is Common Good factor considered by SMEs while performing?

Hypothesis 5: Common Good is not referred among performance evaluation.

Following the reviewed literature for methodology, convergent parallel mixed method was chosen as the most suitable research model for this study, as it allows to collect both quantitative and qualitative data simultaneously.

Research design. Planned methods and data collection

The figure (2) is depicting the flow of the research process:

Methods of research can be summarised as ways of collection of data, statistical techniques to find the correlation between variables and methods to apply to evaluate the final results Goddard and Melville (2004). As previously mentioned, Convergent Parallel Mixed Methods Design was planned to be carried out to provide a more complete understanding of a research problem, as a descriptive research. Quantitative method included questionnaires consisting of questions with yes/no answers and Likert scale. The answers of the Likert scale are evaluated with 7 points scale. This type of scaling is more appropriate, for the objective of this study due to its specifications, such as higher reliability, more variations in response levels, and providing more description for reasoning (Joshi, Kale, Chandel and Pal, 2015). In addition to questionnaires, the statistical data that has been collected from government and international institutions were also considered.

During qualitative research, structured interview questions would be addressed to enterprises, along with questionnaires and answers would be compared

to the questionnaire outcomes. The reason for application of qualitative method for this research is that, questionnaires were not considered enough to find answers for all problems of this study. Interviews would be conducted in an online form due to certain circumstances. According to Creswell (2017), advantages of interviews include:

1. Useful when participants cannot be observed directly
2. Participants can provide historical information
3. Allows researcher 'control' over the line of questioning

In addition, interviews help enrich research, as more data is solicited through spontaneous and open-ended questions from participants. Additionally, interviews often have a higher response rate than mailed surveys and give researchers an opportunity to explain the purpose of their research (Creswell, 2017).

The research covered SMEs in all eleven sectors, in Baku, capital city due to the accessibility of information. According to the report of Statistical Committee of Azerbaijan Republic (2021), there are overall 5943 small and 2710 medium, in total 8153 enterprises in Azerbaijan. 4130 of small and 1700 of medium sized, in total 5830 enterprises are located in Baku. Sectors of business that SME's are operating are categorized in ten different groups and one which is including all the other services.

To obtain a valid and reliable data, a sample group was planned to be created through probability stratified sampling, selecting equal ratio of numbers from each sector. The sample size and type of distribution, the level of significance, how much difference is expected to show are correlated with each other and was decided to be aligned with the process (Kehl and Rappai, 2006). Desired sample size for the research was defined with probability sampling, as 361 enterprises, if confidence level was determined as 95% and margin of error 5%. As reliability and validity of data is of great importance, preliminarily, the questionnaires were planned to be sent to smaller number of companies. Interviews would also be conducted simultaneously, to validate the used methods.

Actual course of the research process

The research has been addressed to SMEs in eleven sectors, in Baku, capital city due to the accessibility of information. The enterprises that participated in the research process are from nine sectors, excluding transportation and storage and accommodation and food service activities. Technological product production and innovative engineering services (1), education (3), finance (1), insurance (2), information and communication (5), industry (4), agriculture, forestry and fishing (2), construction (1), trade (1), human health and social work (1), real estate activities (1), financial and management consulting services (1), HVAC (Heating, ventilation, and air

conditioning) (1), FMCG (Fast-moving consumer goods) (1) and provision of services in other areas (2).

During the research there were few obstacles that hindered the whole process. The research took a year to be completed from 2021 till 2022. The main problem was to reach to the enterprises. A number of government organizations were appealed to support the research with sending the contact details of SMEs or helping with the faster spread of the survey. Some of them agreed to assist, meanwhile others were not responsive.

Hence, another strategy has to be applied to reach to enterprises, using social network website, **LinkedIn**. During September 2021 and January 2022, entrepreneurs or managers were contacted one by one on this platform and asked for possibility of in-person online interview. Applying this strategy was more effective, however the other issue was the reluctance and closeness of the entrepreneurs or managers to complete the interview and survey questions. They were bringing reasons such as lack of time, privacy concerns and current conditions, Covid-19 at that time.

Therefore, in the light of above reasons the research method had to be adapted to the situation. Instead of probability - stratified sampling non-probability convenience sampling was executed, and in-person interviews were replaced with online google survey file and merged with questionnaires. Applying this non-probability method speeded up the data collection process (Taherdoost, 2016).

After completion of the research, total number of the responses were 36. However, unfortunately, 9 of them had to be eliminated as they didn't fit in the SME classification with the number of employees. Due to the small size of the collected answers the research may be biased and validity may not be strong, therefore answering research questions are preferred over hypotheses.

DISCUSSION AND CONCLUSIONS

The research was initiated as inductive research, commencing with the screening of existing literature, to have a sight of state-of-art in the related field. During the literature review, definitions, variables, primary theories were identified with the purpose of creating a research design, building a methodology and proposing recommendations, eventually. Convergent Parallel Mixed Method was the essential approach which was selected as the enabler of the holistic approach, as qualitative and quantitative methods alone would not provide expected reliable and valid outcome. Subject to the characteristics of the gathered data several statistical analyses approached would be performed.

The research design was determined as primary research, consisting of interview questions,

representing qualitative research method and questionnaires, representing quantitative research method. In the course of data collection period, several obstacles were encountered, especially related with the responsiveness of the participants in research sample. The research was aiming to reach to at least 361 enterprises. (Kotrlik and Higgins, 2001). Nonetheless, this task could not be completed during years due to above mentioned reason, and other triggering factors, such as Covid-19. For this reason, the nature of the research had to be modified into **exploratory research** later on. Adopting exploratory research is expected to provide more flexibility for adjustments in the course of study. This can be explained as possibility to conduct mixed methods, finding out the variables and unstudied parts of the topic, availability of answering research questions without generalization since it does not require big sample size.

Proceeding to data analysis method, non-parametric statistics method was carried out. This statistical method has been applied since 1700, and have been improved more during the last sixty years. Non-parametric statistics allows researcher to analyse the data which was collected through ordinal, nominal or ratio scales. Another advantage of non-parametric statistics is its compatibility with small sized samples, up to thirty. Hence, using this method would be more appropriate, make it easier to bring as many interpretations as possible and meeting assumptions without parameterized distribution (Kraska-Miller, 2013).

In conclusion, this research was hectic due to several reasons and there were a few deviations in the direction of the process, hence, the outcomes and interpretations of the data also turned out different. Hence, one of the most important contribution of this research process is related with the methodology. Through the research process there were several factors that had a role in the change of methodology, research design and data collection and analysis. This case was a good example to represent that research is a systematic, dynamic and continuous cycle of activities. It requires a ground knowledge of methodology and statistics, analytical and collaboration skills, motivation, agility to adapt to the changes if required, and ability to see the “big picture”. Another important aspect before starting to the research process is to consider the culture, governmental characteristics and business conditions in the country, to adopt the most suitable and feasible research strategy.

Biographical sketch

Author Leyla Mahmudova, I hold MBA in International Business and I am a PhD candidate at University of Debrecen, *Károly Ihrig Doctoral School of Management and Business*. My research interests are in entrepreneurship, mainly focusing on small and medium sized enterprises. Currently I am studying the performance of SMEs in Azerbaijan, factors that affect the performance of enterprises.

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Table 1
Relationship between approaches of paradigm and methodological questions

	Positivism	Post positivism	Interpretivism
Ontology	Naïve realism: Social reality is ‘real’ and knowable	Critical realism: Social reality is ‘real’ but knowable only in an imperfect and probabilistic manner	Constructivism: the knowable world is that of meanings attributed by individuals Relativism: these constructed realities vary in form and content among individuals, groups and cultures
Epistemology	Dualism-objectivity True results, experimental science in search of laws Goal: explanation Generalizations: ‘natural immutable laws	Modified dualism objectivity Results probabilistically true Experimental science in search of laws, multiplicity of theories for the same fact Goal: explanation Generalizations: provisional laws. Open to revision	Non-dualism; non-objectivity Researcher and object of study are not separate, but interdependent Interpretive science in search of meaning Goal: comprehension Generalizations: opportunity structures; ideal types
Methodology	Experimental-manipulative Observation Observer-observed detachment Mostly induction Quantitative techniques Analysis ‘by variables’	Modified experimental manipulative Observation Observer-observed detachment Mostly deduction (disproof of hypotheses) Quantitative techniques with some qualitative Analysis ‘by variables’	Empathetic interaction between scholar and object studied Interpretation Observer-observed interaction Induction (knowledge emerges from the reality studied) Qualitative techniques Analysis ‘by cases’

Source: Corbetta (2003)

Table 2
Research methods

Convergent parallel mixed method	Explanatory sequential mixed method	Exploratory mixed method
Quantitative and qualitative data collection is collected in the same time and merged	Qualitative data collection is performed after quantitative, to enhance the results of study	Qualitative data collection is performed before quantitative, to specify the needed variables firstly

Source: Adopted from Creswell, (2017)

LIST OF FIGURES

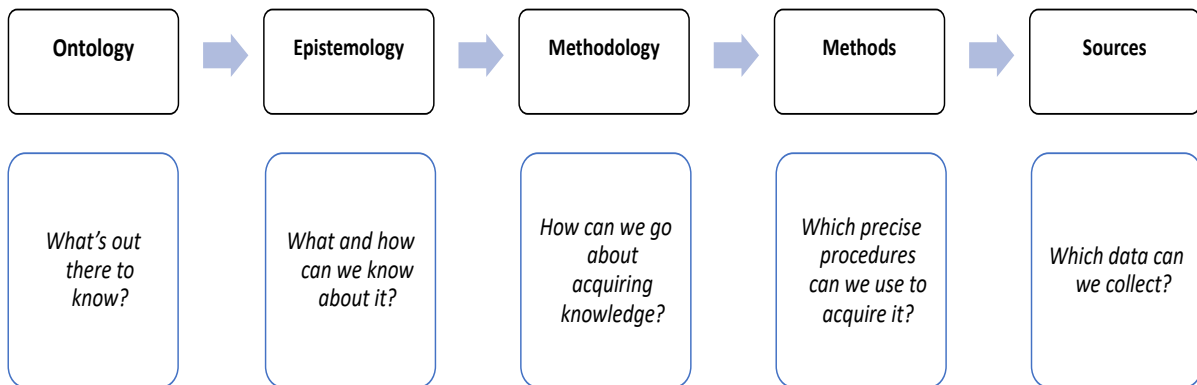


Figure 1
Five main stages of research
Source: Grix, (2002)

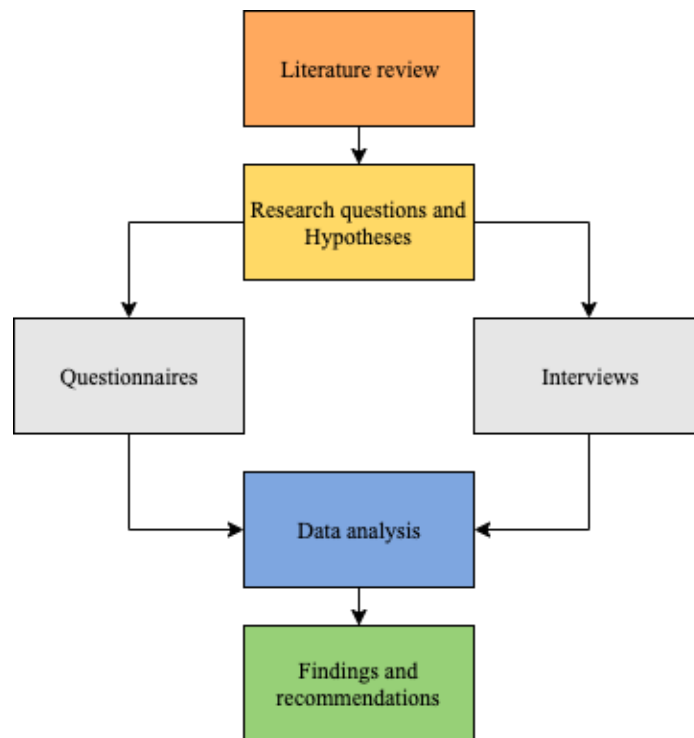


Figure 2
Research flow
Source: Created by author