

CHAPTER THREE: RESEARCH METHODOLOGY

Introduction

In this chapter, the methodology which has been adopted by the researcher in order to conduct the study has been included. This chapter includes the research philosophy along with the research approach. The research design and types of investigation have also been included in this particular section of the study. The data collection methods and the research instrument which has been adopted by the researcher have also been incorporated in this section of the study. Moreover, the data analysis technique has been provided in this section of the study. Furthermore, the ethical considerations along with the research limitations are provided at the end of this section.

Epistemological Stance

In the research study, there are two types of epistemological stance which include interpretivism paradigm and positivist paradigm. In reference to the research study conducted by Antwiand Hamza (2015) it has been stated that by using the quantitative measures with the adoption of empiricist philosophy, the association between the variables is measured by positivist paradigm. It has been assumed by the following stance that the truth is objective. In contrast to this, the interpretive paradigm is qualitative analysis and is related to the subjectivity. This type of approach is based on the opinions and interpretations of the researchers and as well as participants. In this particular study, the researcher has adopted the positivist paradigm. This is because of the purpose that this study aims in order to identify the relationship among two variables which are financial performance of the firm and macroeconomic indicators. This study is

concluded by the researcher with the help of supporting the study with quantitative data. In this manner, this approach is more suitable for this study.

Research Approach

The research approach is closely related to the significance and hypothesis of the research. A particular approach is adopted by the researcher in order to conduct the study. It has been specified in the research study of Hayes et al. (2018) that there are two types of research approach which includes deductive and inductive approach. In the inductive approach, a particular theory is adopted by the researcher which has already been established in the past researches and is experimented in the study. This type of approach is most commonly used in qualitative researches. In contrast to this, the deductive approach is the one in which the relevant hypothesis is generated by the researcher in accordance to the preposition of the study. In order to obtain the findings and the results, the generated hypotheses are then tested. Since the study is established on the positivist philosophy, thus the approach which is adopted by the researcher is the deductive approach. This is because of the purpose that the hypothesis are developed at the beginning of the study and are being tested throughout the study based on the data that has been collected for the purpose of analysis.

Research Design

Through the entire research, the research design is the strategy which is used by the researcher. Depending on the aims and objectives of the research, there are different

types of research designs. In reference to the research study conducted by Guetterman, Fetters and Creswell (2015) it has been stated that there are three types of research designs which include mixed, qualitative and quantitative research designs. In the quantitative research design, the data is collected and analyzed on the basis of numeric values and quantifiable figures. In the qualitative research design, the data is collected by the researcher on the basis of content and quality. On the other hand, the mixed research design includes both qualitative and quantitative data. In this research study, the researcher has adopted a quantitative research design. This is because of the purpose that the positivist paradigm has been adopted and they are quantitative. Since this study is related to financial performance and economic indicators which makes it imperative, this generates the need for the author to utilize the numbers. The financial data has been gathered in this study and has been analyzed using quantitative methods and techniques that involve the numbers and figures. In this manner, the impact of macroeconomic indicators on the financial performance of the firm has been identified on the basis of facts and figures.

Types of Investigation

In order to use an appropriate and specific type of investigation for the purpose of carrying out the study is extremely important for the authentic research study. It has been specified in the research study of Lune and Berg (2016) that the most common types of investigations used by the researchers in order to conduct the study include descriptive, exploratory and explanatory research. The connection between ideas is made in the explanatory research that is included in the topic. With the help of this

research, the researcher is able to explain the causal relation between dependent and independent variables of the study. On the other hand, the exploratory research is focused on exploring the problem in an efficient manner which has not been explored in the previous researches. Moreover, different aspects of the topic are explained by the researcher with the adoption of descriptive research. In this study, the researcher has adopted the exploratory research. This is due to the purpose that the impact of macroeconomic indicators on the financial performance of the firm in the context of automotive sector of Pakistan has never been explored in the previous studies. This generates the need for exploring the impact in the automotive sector of Pakistan. This is the reason that the researcher has adopted exploratory research.

Data Collection Method

For the purpose of collecting the data in order to conduct the study, a specific method of data collection is adopted by the researcher. In reference to the research study conducted by Palinkas et al. (2015), it has been stated that there are two methods of data collection which includes a primary method of data collection and secondary method of data collection. In the primary method of data collection, the data is collected through survey questionnaires and interviews. On the other hand, the secondary data is collected from the articles, journals, books, and other authentic websites. In this study, the secondary method of data collection has been adopted by the researcher. This is because of the purpose that the data related to macroeconomic factors have been obtained from the government websites, World Bank reports and other relevant sites like statista. On the other hand, the data related to the financial performance of Pakistan's automotive sector was obtained from authentic forums and the country's

economic stability. This is the reason for the adoption of a secondary method of data collection.

The data of the companies has been collected from the year 2009 to 2018. These companies include Al-Ghazi Tractors LTD, Atlas Honda LTD, Ghandhara Industries LTD, Ghani Automobile Industries LTD, Hino Pak Motors LTD, Honda Atlas Cars LTD, Indus Motor Company LTD, Millat Tractors LTD, Pak Suzuki Motors LTD, Sazgar Engineering Works LTD and Dewan Farooque Motors LTD.

Sources of Data

No.	Variables	Source
1	Inflation	Theglobaleconomy.com
2	Exchange Rate	Investing.com
3	Political Stability	World Bank Data
4	Interest Rate	Indexmundi.com
5	GDP Growth	World Bank Data
6	Money Supply	World Bank Data
7	Firm Size	Thomson Reuters
8	Earning Per Share (EPS)	Thomson Reuters
9	Return on Assets (ROA)	Thomson Reuters
10	Return on Equity (ROE)	Thomson Reuters
11	Earning Before Interest and Tax (EBIT)	Thomson Reuters

Research Instrument

Research instrument suggests that using a specific method of data collection, how the data has been gathered by the researcher. Since the researcher has adopted a secondary method of data collection, therefore the data is collected through various sources which include books, articles, journals, websites and annual reports of the companies. The data related to macroeconomic factor has been gathered from the annual global competitiveness report which is published by the World Economic Forum. Moreover, the data which is related to the automotive sector of Pakistan has been gathered from the annual reports of the listed companies. In this manner, the data has been gathered by the researcher for the purpose of conducting this study. The financial data has been collected from the financial reports of the company for the period of 10 years.

Data Analysis Technique

There are two types of data analysis which include non-statistical and statistical. Since the study has been based on the positivist philosophy and quantitative design, therefore the statistical techniques are used by the researcher in order to analyse the data. In order to measure the impact of macroeconomic indicators on the financial performance of the firm, the researcher has adopted E-views. On the other hand, the correlation and

regression analysis are used in order to assess the relationship between the two variables. The regression equations for the study are portrayed below:

$$1. ROE = \alpha + \beta_1 Inr + \beta_2 Er + \beta_3 P + \beta_4 I + \beta_5 Y + \beta_6 M + \beta_7 Fs + \epsilon$$

$$2. ROA = \alpha + \beta_1 Inr + \beta_2 Er + \beta_3 P + \beta_4 I + \beta_5 Y + \beta_5 M + \beta_7 Fs + \epsilon$$

$$3. EPS = \alpha + \beta_1 Inr + \beta_2 Er + \beta_3 P + \beta_4 I + \beta_5 Y + \beta_6 M + \beta_7 Fs + \epsilon$$

$$4. EBIT = \alpha + \beta_1 Inr + \beta_2 Er + \beta_3 P + \beta_4 I + \beta_5 Y + \beta_6 M + \beta_7 Fs + \epsilon$$

ROE = return on equity.

ROA = return on assets.

EPS = earnings per share.

EBIT = earnings before interest tax.

α = represents the Constant/ Intercept.

$\beta_1 Inr$ = inflation rate.

$\beta_2 Er$ = exchange rate.

$\beta_3 P$ = political instability.

$\beta_4 I$ = interest rate.

$\beta_5 Y$ = GDP.

$\beta_6 M$ = money supply.

$\beta_7 Fs$ = firm size.

ϵ = error term

With the help of the regression, the impact of macroeconomic indicators on the financial performance of the firms that are operating in the automotive sector of Pakistan has been identified. In addition to this, the correlation analysis has also been conducted for the purpose of identifying the relationship between the macroeconomic indicators and financial performance of the firms.

Ethical Considerations

While conducting the research, it is the prime requirement that the study is carried within the ethical limitations and boundaries. It has been ensured by the researcher while conducting this study that the data which is collected from the secondary sources are properly cited and referred. This is to appreciate the work which has already been done by the researchers in this context.

Research Limitations

This research was carried out to find the impact of macroeconomic indicators on the financial performance of the firm. However, there were several limitations that were faced by the researcher while conducting this study. Firstly, there was a lack of accessibility while extracting the data from secondary sources. This limits the useful information collected from secondary sources. Moreover, there was limited time available in order to conduct the study.