MBA FINAL THESIS

Crisis Management in Small and Medium Entreprenuers in Azerbaijan

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Abstract

In the business world, which has become globalized and increasingly interdependent and has a more complex structure in all areas of life, but especially in economic, social, legal and political fields, adversities have been experienced one after another and will continue to be experienced. As a result of this, the negativities in any region or country have reflections on other countries in the form of crisis. Although these effects and their consequences vary from country to country, from sector to sector, they affect the entire working life and therefore people. Not every negativity experienced by organizations is considered a crisis, but developments that threaten the existence of the organization and disrupt its continuity are considered a crisis. However, whether the source of the crisis is local or global, whether it is caused by natural disasters or epidemics, competition or management, all crises have reflections on organizations. Regardless of the reason, the reflections and effects of the crises that are not managed well on the organizations show themselves as resource shortages and economic losses due to the decrease in income. Organizations that do not learn from their experiences despite experiencing such frequent and many crises often do not know what to do, and they endanger both their own future and the future of other organizations with which they are in relationship with the wrong decisions they take. While some of the crises can be foreseen, some are difficult to predict, but still, most of the organizations are unprepared even for the crises they are sure to come. While the economic indicators of 2019 indicate that the public and private debt stock is high and that this may trigger a crisis, it is possible to see it in the deepening crisis with the rapidly spreading COVID-19 epidemic. This unpreparedness also affects the management of the crisis process. It is for this reason that nearly three-quarters (74%) of organizations seek outside help to overcome the crisis (PwC, 2019). The study will be conducted on 45 Small and Medium Enterprises operating in Azerbaijan and a research strategy will be used to investigate the findings. The relationship between the variables will determine the relevance of the measures taken during the crisis to the outcome of the pre-arranged plans. Finally, company executives will be advised on the steps they need to take to improve the measures to be taken before and during the crisis.

Keywords: Crisis Management, Small and Medium Entrepreneurship, planning, technological innovation.

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1. Introduction

1.1. Rationale of the study

Crisis; It can be expressed as a word in unexpected situations, where extraordinary conditions occur and prevent normal activities (Titiz, 2003: 112).

Before the 1980s, the crisis did not have much impact on the environment, as the communication and technology infrastructure was not sufficient. However, the crisis that occurred in one country as a result of globalization and technological developments in 1980 and later began to affect other countries rapidly.

Just like in other post-socialist nations, Azerbaijan has undergone economic reforms and transformed into a modern market economy. Economy liberalization, privatization of ownership, development of SMEs, the establishment of market infrastructures, promotion of competition and creation of local and external markets are all part of these processes of development. The growth of the business sector is necessary to establish an effective national economy in the Azerbaijan Republic. It delivers excellent domestic goods and services, expands export capacity in the country, increases jobs, plays a significant part in setting a government budget, improves competitiveness, and affects the country's economy's productivity.

One of the priorities of the market economy is the growth of small and medium-sized enterprises. World experience demonstrates that small businesses have an essential role to play in the market economy, establish economic growth rates and increase the efficiency of the distribution of material, financial and human resources. On the other hand, job creation is an economic priority and the creation of new positions in small businesses is cheaper than in bigger organizations (Vergil, 2014: 45). The business operations of small and medium-sized enterprises also help to resolve social problems in society and build regional and small-scale economies and create new employment, jobs, and competitive conditions in the country. SMEs also have a major economic activity. The function of small enterprises is not ended by increasing the production of inexpensive items. Contracting is a guide to economic and social structural change and a single instrument. This shift is a stimulant for economic growth and has an impact on the total increase in production.

The first duty of business and SME managers against crises is to take the necessary precautions before the crisis occurs, to minimize the damage that may occur or to ensure that the crisis passes tangentially (Armstrong, 2006: 106). The second task; In the event of a crisis, trying to use intra-organizational communication and activities in the most efficient way, and the third task is; It should be an effective and comprehensive study on the lessons that can be taken from the crisis experienced with the decrease and end of the impact of the crisis. In unexpected situations, whether it is an opportunity or a crisis, the failure of these activities to be fully performed may leave companies in a difficult situation. These methods should be applied successfully in order not to interrupt the company's activities (Ural, 2003: 84).

The economic decisions taken by the businesses increase the market and share value of the company, thus causing an increase in wealth. As a result of the wrong economic decisions taken, it may cause the bankruptcy of the companies. The importance of the economic decisions taken as a result of the economic turmoil in recent years is increasing day by day (Titiz, 2003: 115).

The main purpose of this study; In the face of crises that may be of national or global origin, to find answers to the questions of what kind of activities are involved in crisis management of small and medium-sized enterprises operating in Azerbaijan. In this context, data were collected and analyzed by using online questionnaire technique from businesses operating in. With this research, it is expected to provide support to businesses that have the ability to be SMEs in crisis management. It will take place in the literature as an important study about the basic tasks that should be done when SMEs start to institutionalize crisis management. It is thought to support the literature studies on SMEs and crisis issues aimed at institutionalizing the crisis. It is known that crises in the business world can only be overcome with an effective crisis management. In this study, the steps that need to be done in order to overcome the crisis periods with the least damage and how strongly they are done will be discussed. In the research part of the study, the research

results of the SMEs operating in Azerbaijan are presented, at what stage and what kind of work they do against crisis management.

1.2. Research objective and research questions

As mentioned before, importance of SME's for the economy of the countries are very crucial. Regulations established recently by Azerbaijan government shows that government also support SME's not only to survive but also encourage others to start business for Azerbaijan. However, Azerbaijan is being a young developing country, managing economic crisis is also essential for both existing and future SMEs in Azerbaijan. The purpose of this study is to investigate and monitor the existing situation of crisis management systems in SMEs in Azerbaijan. Further objectives for this study is also as below;

1) to investigate the factors (age, capacity, education level of managers) for SMEs to implement a crisis management system.

2) To clarify the efficiencies of crisis management systems in place for SMEs and give directions recommendations to SMEs for their future plans.

These purposes address some research questions to investigate and find answers for the study;

- What is the relation between age, human resources capacity and education level of managers with having a crisis management plan in place for SMEs?
- Having a crisis management plan or policy is effective to reduce the impact of crisis for the company?
- What is the most common policies for crisis management and their effectiveness for reducing the impact of crisis?
- What is the relation between cause of the crisis and impact of it to the company?
- What is the relation between the policies followed and the impact of the crisis to the company?
- What is the relation between the national crisis factors with the company crisis factors?
- What is the relation between cause of the crisis and the education level of managers which will help us to understand their way of understanding the root cause for the crisis?

1.3. Research approach

Organizations should act in a way that they can get out of the crisis most easily while planning their activities. Regardless of the type of crisis, routine answers are insufficient in organizations and there are problems in terms of management. The management, which has to react urgently to the crisis, has difficulties even in defining its own goals. Although there are crisis management strategies put forward by different authors in the literature for managers to effectively manage the crisis under these adverse conditions, according to Aksu (2008), the approach of escaping the crisis and resolving the crisis are the two main methods, whereas Shahin (2008) and Bulduklu et al. (2011) emphasize that there are proactive and reactive crisis management strategies in addition to these two strategies.

A proactive management strategy can be applied within the framework of the crisis avoidance approach. Crises in which organizations are exposed to various positive and negative consequences indicate that the organization may face a crisis by sending early warning signals before they occur. For this reason, it is necessary for all organizations to scan their internal and external close circles so that they can receive early warning signals and correct them. At this stage, the managers taking the necessary precautions and taking action is defined as a proactive (protection) crisis management strategy (Ural, 2003: 85). Proactive approach adopts continuous improvement in organizations. With this approach, the organization can achieve cost minimization, strong communication, fast bureaucracy, and as a result, the efficiency it can achieve by spreading it over time, which will enable it to gain competitive advantage in the long run (Karabagh, 2003: 31).

Cresswell's research is an example of how data is collected using a quality method to identify the economic and management problems of SMEs when using technology. The aim of the research is to determine the problems of SMEs by gathering detailed and in-depth information about the current problems and situations of SMEs in the use of technology (Yildirim & Shimshek, 2011). Qualitative research is the research in which results are reached without including statistical procedures. It is not intended to make generalizations on the main population over the sample used in qualitative research. The purpose of qualitative research is to examine the answers given about the researched subjects in depth (Yildirim & Shimshek, 2011).

Research data were collected through a questionnaire. The data obtained from the study were analyzed in the relevant statistical program and categories were created. The content was then analyzed according to the data. Content analysis is one of the most widely used methods for analyzing quality data.

1.4. Outline of the document

Within universities, candidates are often required to follow certain procedures when preparing a thesis. In addition to university-specific internal styles, there are national and international standards and recommendations specific to a number of areas for the presentation of theses, such as ISO 7144 (https://www.iso.org/standard/13736.html). Other applicable international standards include ISO 2145 for section numbers, ISO 690 for bibliographic references and ISO 31 for quantities or units.

Older standards at some universities require that the preamble (title page, abstract, table of contents, etc.) use Roman numerals to use a separate page number sequence from the main text. Contrary to the relevant international standard and many new standards, some authors continuously number all pages of the document from the first page, regardless of the number of printed pages, which can lead to confusion in book design (https://www.iso.org/standart/13736.html).

Presentation requirements, including pagination, layout, type and color of paper, use of acid-free paper (where a copy of the dissertation will become a permanent part of the library collection), paper size, order of components and citation style. page should be checked (https://en.wikipedia.org/wiki/Thesis#Structure_and_presentation_style).

Taking into account the above and the internal instructions of the university, the following sections are included:

- Abstract;
- Introduction;
- Literature review;
- Methodology;
- Result;
- Conclusion;
- References;
- Appendices.

With this in mind, the outlines of the research were established. The first chapter of the research begins with a justification of the research, followed by research questions, hypotheses, research objectives, and a description of the methods selected in the research methodology. At the end of the chapter, the main outlines of the study are identified and shown.

In the next chapter, the theoretical basis of the topic is determined by giving examples from the database sources to be used in the research in accordance with the literature review approach. The main part of the literature review focuses on crisis-related concepts, theories of small and medium enterprises, comparing the results of the introductory data presented in the previous chapter, and the impact of the crisis on small and medium enterprises. After reviewing the literature, the basis for the methodology and analysis section will be developed.

The third chapter presents the research methodology, the first chapter describes the research strategy, explains the basic principles, outlines the general principles of the data collected by the

questionnaire, and then describes the results obtained. At the end of the chapter, the author describes the reliability of the research and the ethical problems it faces, the difficulties it faces during the research process.

2. Literature Review

2.1. Introduction

As mentioned at the beginning of the chapter, there is no definition of crisis in the management literature. For this reason, researchers working on the subject give different definitions of the crisis. The crisis of investigation defines it as a situation that poses a potential threat to the existence of the organization under its influence (Reilly, 1987: 80).

According to Brewton, a situation can be described as a crisis if it causes serious disruption in activities, an increase in the regulations made by the state in the institutional field, a negative perception of the public about the business, financial difficulties, inefficient use of management time, and weakening in the morale and support of the employee (Brewton, 1987: 10). Shrivastava and Mitroff accept that the crisis that arises in enterprises threatens the most important goals of an enterprise - the survival of its commercial life and its profitability (Shrivastava and Mitroff, 1987: 6).

In order to be mentioned in a crisis situation, it must threaten one or more of the important goals of the organization, allow a short decision period before it is transformed significantly, and come as a surprise (Keown-McMullan, 1997: 4).

The crisis does not always involve a bad and negative situation for the organization. The Chinese word wei-ji, which means crisis, describes this situation very well. As a matter of fact, the word wei-ji, which means crisis in Chinese, consists of the combination of the words danger and opportunity. In reality, the crisis can be thought of as a turning point. A crisis is defined as a series of activities that lead to decisive change in a period of instability or in the near future. The set of activities that lead to change includes the possibility of certainty in an extremely undesirable outcome or certainty in a highly desirable and extremely positive outcome (Keown-McMullan, 1997: 4).

Crises can often come by giving warning signals step by step, but they can also emerge with some sudden new formations. In this context, crises occur in two different ways in terms of their emergence. Sudden crises, without any warning to the managers of the business; Employees, investors, customers, suppliers, the public and the company's income and stock prices include sudden deterioration and imbalance situations that negatively affect. Continuing crises, on the other hand, are forms of crisis that cannot be directly understood from outside or inside the company, but can be perceived with different signals and analysis and control techniques applied at various times. In both crisis forms, negative effects and costs arise in terms of business activities (Irvine, 1987, p.37).

It is stated that crises differ from normal conditions with the following features (Vergil, 2014);

- They make the prevention and adaptation mechanisms of the enterprise inadequate,
- They resemble serious life-threatening diseases, require urgent and very serious interventions,
- They create a tense environment, they are critical and threatening, they create uncertainty, anxiety, insecurity, fear and panic.
- They affect all the elements associated with the system,
- Due to their unique characteristics, they do not allow the use of pre-prepared prescriptions,
- They require a review of existing values, goals and assumptions,
- They often appear out of nowhere.

A “crisis” occurs when there are big and important differences between the level of interaction between the business plans and the business environment, and what the business management thinks and what actually happens (Andriole, 1985: 24).

Many factors, both external to the enterprise (environmental) and internal (organizational), have an impact on the emergence of crises. However, in general terms, it can be said that the mutual negativities between the enterprise and its environment are effective in the emergence of

the crisis; either the demands and expectations of the environment exceed the resources and capabilities of the enterprise, or the environment cannot meet all the needs and expectations of the enterprise. This incompatibility disrupts the balance of the business and causes a crisis (Dincher, 1998: 385).

External sources of crisis have some positive aspects for organizations, but internal events can also provoke crisis, even if they occur unintentionally as by-products of other actions. More interestingly, internal crisis factors can also be in the form of sincere and conscious actions that can create gaps in the organization (Hurst, 2000: 160).

Developed societies face crisis due to technological factors rather than natural factors. Modern technology affects not only consumers but also business employees due to technological deficiencies and drags businesses into crisis (Lerbinger, 1986: 5).

Crises can be classified in different ways depending on the life cycle of the organization, the hierarchical level and the causes of the crisis, and they can also be differentiated depending on the severity of the crisis.

Until the middle of the twentieth century, crises were attributed to real economic variables such as demand, technological progress or the rate of profit. Today, types of crises have emerged that occur in money and foreign exchange markets, stock markets, banking sector, hot money movements, start in financial markets and gradually show their effects in real markets (Boratav, 2004: 107).

Basically, it is possible to divide the economic crises into two. First; real sector crises, which are divided into crises in the goods and services market and unemployment crises in the labor market. The second is financial crises, which are divided into banking crises, currency crises and stock market crises.

Discussions about the emergence of the crisis show that the crisis has a perceptual dimension. Therefore, when crises are examined on the basis of their emergence, it is possible to distinguish between potential crises, perceived crises, felt crises and experienced crises. While potential crises correspond to the situation of finding the reasons for the emergence of the crisis, perceptual crisis is related to the perceptions of the parties concerned, it is more intuition-oriented, and at this point, it may be possible that the perceptual differences of the managers create a crisis. While the perceived crisis defines the situation in the period when the differences in the behavior patterns of the parties are observed, the experienced crisis defines the actual situation.

The most common types of crises in businesses are (Hurst, 2000: 160):

- Leadership crisis, which occurs as a result of a top manager who does not have a charismatic personality, cannot impose himself on lower level managers,
- The autonomy crisis that emerged as a result of the fact that the people who founded the business did not leave the management to the professionals, and the lack of institutionalization,
- The audit crisis that emerged as a result of the growth of the business and the lack of sufficient authority to different units,
- The bureaucratic crisis that emerged as a result of the expansion of the correspondence and reporting system in order not to lose control,
- The crisis of conflicts of interest that arises as a result of the unit or top manager making decisions based on scientific or personal interests in order to highlight his own capacity and importance of doing business,
- The strategic crisis that arises when the external environment is constantly changing as well as the failure of the management,
- A functional crisis that arises when the business fails to achieve its functional goals or if there is a danger of not being able to achieve these goals,
- A liquidity crisis that occurs when the business does not have the resources it can use to meet its cash needs.

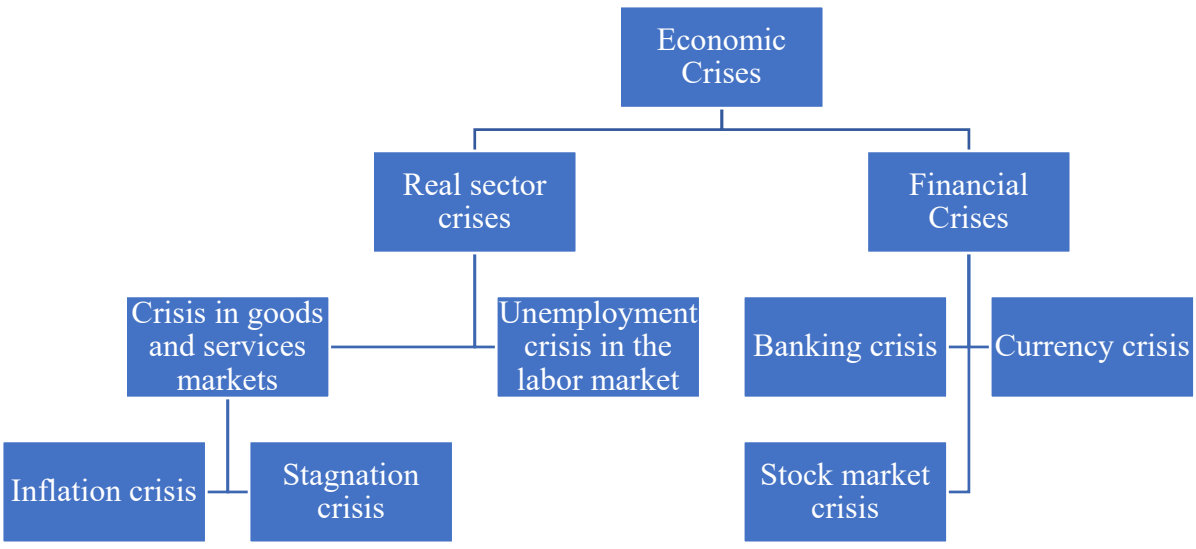
But regardless of the type of crisis, crisis is crisis in terms of management relations. For the manager, the size of the crisis is important, not the type.

2.2. Concept of Crisis and Types of Crises

The word crisis comes from the Greek word "crisis". The meaning of the word is to decide. Crisis has very broad meanings as a word and in economics, and a common decision has not been made in its full explanation. However, the crisis is commonly referred to as a “depression”, a “depression”, a “deterioration” and a “depression”. A crisis is a situation that develops suddenly and needs urgent intervention in the area that has occurred as of the moment it occurred. If it is not intervened or if the intervention is delayed, it can cause major and unavoidable problems in the area where it occurs. For this reason, in the event of a sudden crisis in the economy, the causes should be urgently investigated by the state organization and appropriate solution methods should be found. In every crisis that occurred today and before, many policies were produced by the state to stop the crisis, in some cases it was successful, but in some cases it was too late to prevent or stop the crisis. A crisis is an unpredictable and sudden deterioration (Keown-McMullan, 1997:4). Economy and society progress in the same course, and such situations may occur while life goes on. When we want to reduce crises to daily life, fire, earthquake, etc. Natural disasters are a crisis. Unless urgent measures are taken, it can cause the society and the state to be shaken, worn out and even collapsed. If we need to specify in terms of economy, it is a situation that suddenly emerges and needs to be taken into account. At the time of crisis, the markets in the economy become inoperable, become overly sensitive, and this causes great fluctuations in the economy that endanger the life of the society. Therefore, crisis is a concept of movement.

Although a clear conclusion could not be reached regarding the crises, although the common denominator that all economists united could not be foreseen, it was agreed that they could be slowed down or stopped with fast and logical solutions to reduce their consequences and effects. Even though there are differences in definition, a common denominator has been reached in crisis types.

Figure 1 Types of Crises



Source: Laws E., Prideaux B. (2007). Crisis Management in Tourism, CABI, UK.

Crises are divided into two as real sector crises and financial crises. We can name real sector crises as contractions in goods, services and labor force, new production and employment.

Financial crises, on the other hand, can be named as irreversible loans in the banking sector and fluctuations in the financial market such as foreign exchange and stocks.

2.3. Causes of Crises

Until the 1929 Economic Depression, there was an assumption that the economy would stabilize on its own and that there would be few crises. As a result of the crisis and the unemployment that followed, it was assumed that this assumption was not correct and that the economy would only stabilize with state intervention. As a result of the government being effective with its fiscal policy, many opinions have been put forward those internal variables cause crisis and external variables cause crisis. In the occurrence of crises, first, the reasons for not being fully understood and therefore the implementation of wrong economic policies, inequality of income-expenditure balance and current account deficit problems are observed. Before or during the crisis, the causes of the crisis were not fully understood, and wrong policies were applied. Apart from the economic reasons, in the crises experienced, political and cultural fluctuations have created fluctuations in the economy. In particular, the economic changes listed below invite crises in terms of both danger and opportunity.

- Globalization,
- International and regional integrations gaining importance,
- Liberalization in foreign trade,
- Newly formed large markets,
- Market potential in countries entering the process of collapse of socialism and transition to market economy.

In addition, sudden cyclical movements, and fluctuations in the general level of production, employment and prices in the economic process can also cause crises such as depression, hyperinflation and unemployment. Cyclical movements are developments that occur because of the natural functioning of a market economy. In addition, the intervention of the state in the economy through economic policies (such as sudden devaluation, raising tax rates or increasing the tax burden) can lead to economic crises. Advances in information and communication technology, innovations in material technology and technological innovations are opportunities for some organizations, while they can lead to crises for others. For example, it is very difficult for organizations that cannot keep up with the developments in the world of science and technology or are backward in this direction. Science and technology are one of the main factors determining competitiveness.

2.4. Definition of the Crisis Management

Crisis management is to identify warning signals to prevent a possible crisis, to establish protection and prevention mechanisms, to eliminate an existing crisis or to determine and implement measures that can minimize its damage.

Crisis management has been defined as a systematic process carried out within the framework of minimizing the losses of its stakeholders by ensuring that the business continues its normal activities (Pearson and Clair, 1998: 63).

The purpose of crisis management is to help the organization recover from crisis or, more effectively, to manage the organization in an effective way that will not fall into crisis. If we consider the development and growth opportunities of crises at the same time, crisis management aims not only to get out of the crisis but also to benefit from the crisis environment. The effectiveness of the crisis management structure allows the incoming crisis to be foreseen and to turn it into an opportunity.

In line with previous studies, the crisis management team first determines what kind of crisis is experienced in the business. The name of the crisis is given as a result of the situation analysis. The effects of the crisis are determined by the managers. Then, the strategies required to solve the crisis are put into practice. From this point on, the important thing is to control the crisis and ensure recovery. It focuses primarily on solving critical issues. At the previously determined crisis

management center, the members of the crisis management team come together to review the strategies and tactics implemented and make the necessary changes immediately. Since crisis management is not a strategic formula, it is put into effect immediately by taking decisions appropriate to instant changes (Pearson et al., 1997: 52).

Crises usually occur in all the components that make up the organizational system. Since the technological subsystem, the structural subsystem, the goals and values subsystem, the psycho-social subsystem and the administrative subsystem are mutually interactive, the negativity seen in any one of them will be reflected to the others to a large extent. A comprehensive crisis assessment needs to examine the managerial priorities associated with each of these systems and their potential impact on each other. It is necessary to know in advance how others will react to a change in any of these systems and to what extent they can adapt to this change.

The management approach adopted by the top management in the organization and how the top management uses its authority have an impact on the motivation and performance of the employees. If the management approach and the way of using authority are not used in a way that will positively affect the motivation and performance of the employees, undesirable situations such as demoralization, restlessness and inefficiency occur within the organization, reducing the commitment of the employees to the organization and creating a crisis threat for the organization. Apart from the top management's understanding of management and the way they use authority, the personal mistakes of managers are also an important crisis threat for organizations. Many crises faced by organizations arise as a result of personal mistakes, such as decisions made or not made by incompetent and unsuccessful managers, and misapplications (Pira and Sohodol, 2004: 32-33).

Having a crisis-sensitive and viable action is to define the processes necessary to address and evaluate future crises. At the core of this process are appropriate information systems, planning procedures and decision-making techniques (Pira and Sohodol, 2004: 32-33).

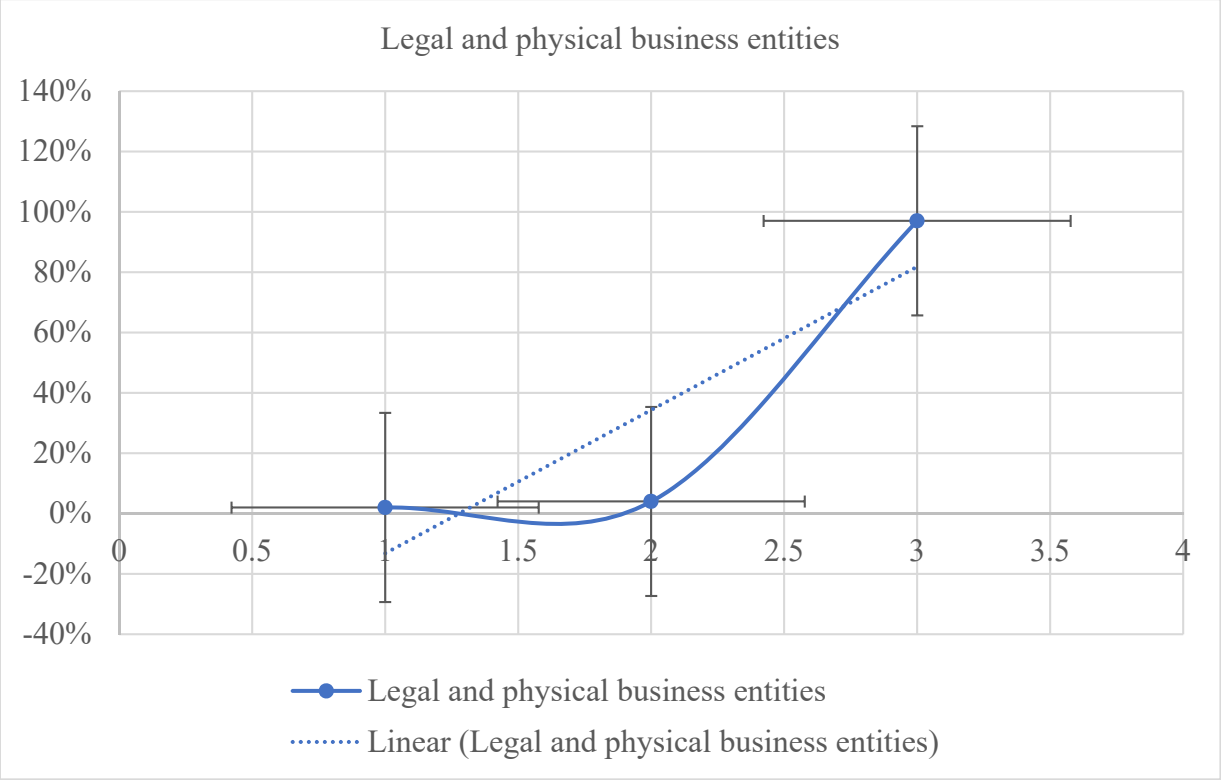
2.5. SMEs of Azerbaijan

Suspension of inspections and analyzes in the field of small and medium business for 2 years, reduction of the number of licenses and permits for entrepreneurial activity, as well as the amount of fees paid, simplification of permitting procedures, including the creation of an electronic portal, establishment of Boards, ”Principle, tax for 7 years to increase investment, as well as customs benefits, further expansion of electronic customs services to simplify customs, procedures for import and export operations - to minimize the number of required documents, for customs clearance of goods and vehicles Creation of "Green Corridor" and other access systems, etc. work has been done.

The trade environment in Azerbaijan has improved in recent years, and the Doing Business 2020 report has achieved high results in some indicators.

Also, the criteria for SMEs were determined by the decision of the Cabinet of Ministers of the Republic of Azerbaijan dated June 5, 2019 No. 215 "On approval of criteria for large, medium and small entrepreneurs." These decisions have a direct impact on the development of SMEs in the country. According to the criteria, 2% of legal and physical entrepreneurship entities registered in 2020 are large, 4% medium and 97% small entrepreneurs.

Graph 1 Number of legal and physical entrepreneurship entities in 2020



Source: https://www.stat.gov.az/source/entrepreneurship/?lang=az – SME annual report 2020

According to the State Statistics Committee of the Republic of Azerbaijan, the share of small businesses in the non-oil sector in 2020 will be 5.9% of value added, 0.8% of gross profit, 6.6% of the average annual number of employees.

At the same time, according to official statistics, as of January 1, 2020, the share of small businesses in the country in GDP was 5%, employment 6.4% and production 9.7%.

The share of individual entrepreneurs and small enterprises in GDP, which make up 99.3% of the country's enterprises, is very small (Strategic Road Map, 2020: p.33). Therefore, the share of SMEs in the economy of Azerbaijan - the share of GDP, employment and foreign exchange inflows into the country can be increased many times. In this regard, it should be noted that the share of SMEs in the future development of the country is extremely important.

Azerbaijan has a strong potential and ample opportunities for the development of SMEs and the country's economy as a whole. Improving the general working conditions, eliminating problems with access to financial resources, ensuring the access of small and medium enterprises to domestic and foreign markets, and creating a skilled and qualified workforce are very important steps.

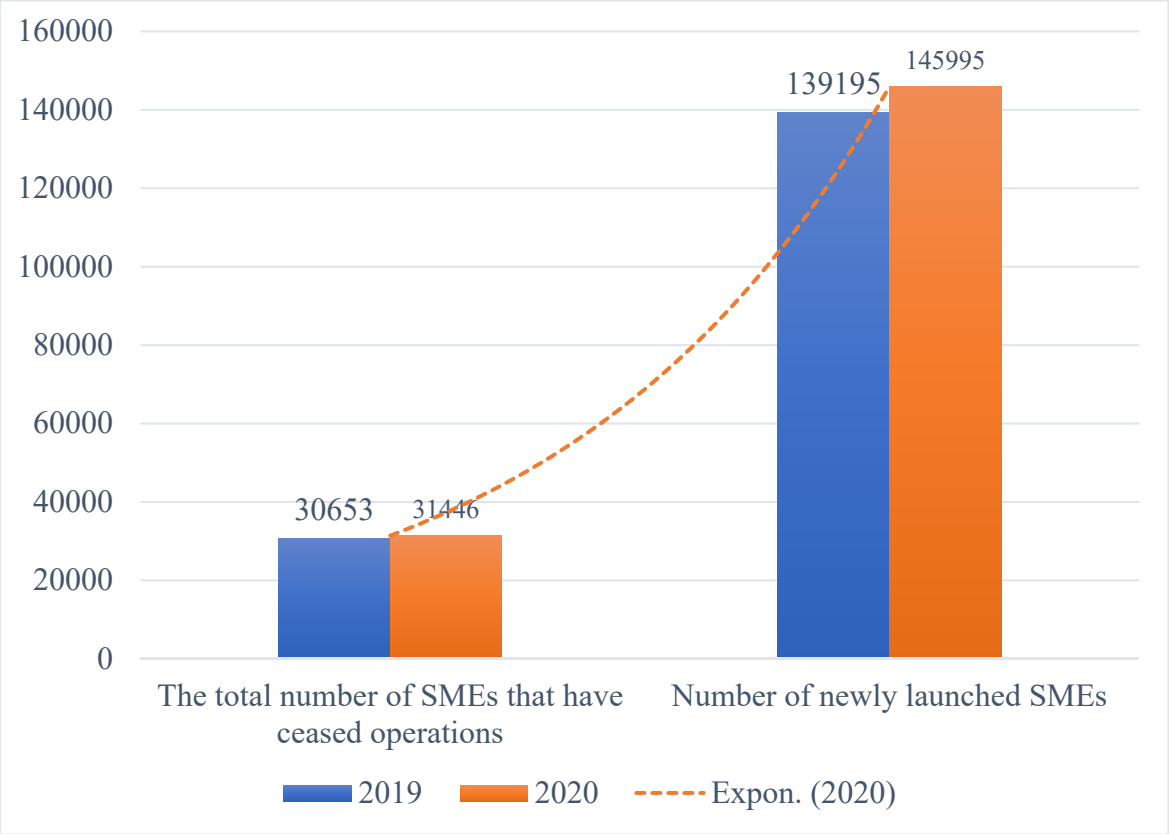
If we pay attention to these processes, we can see that the cooperation between SMEs and businessmen is deepening, and the growth rate of state support is observed. That is why many changes are needed in this area to fully realize the potential of SMEs to diversify the economy. Some progress has been made in improving the legal framework, as well as some improvements.

If we look at the number of SMEs in Azerbaijan in recent years, it is clear that this sector has undergone a great development until 2018, and their number has increased every year (Strategic Road Map, 2020: p.96).

The main reason for the cessation of SMEs in 2020 was the widespread spread of the COVID-19 virus in Azerbaijan. During the pandemic, the most affected enterprises were SMEs.

Along with the application of a strict quarantine regime, the suspension of work, the dismissal of employees, the accumulation of wages, the demand for refunds to customers in some sectors (for example, tourism), etc. The circumstances are clear evidence of this. Many companies that could not cope with this situation almost completely ceased their activities.

Graph 2 Number of enterprises started and suspended



Source:(https://www.stat.gov.az/source/entrepreneurship/?lang=az – SME annual report Azerbaijan Statistics Committee 2020

2.6. Negative effects of crises on business activities

There are many studies investigating the effects of crises on SMEs. According to Eggers (2020), studies examining the financial aspects of SMEs during the crisis constitute 50.7% of the literature. Considering the importance of SMEs in job creation, innovation and economic growth, it is normal for them to be the subject of many studies.

Apak, Erol and Atmaca (2012) determined that SMEs in Turkey attach importance to precautionary and defense strategies that provide cost savings and accelerate cash flow in times of crisis. Proencha, Laureano, and Laureano (2014), in their study examining the 2007-2010 period of SMEs in Portugal, determined that the debt ratio of enterprises decreased due to the high cost of external financing during the financial crisis. He and Ausloss (2017) found that more than 20% of SMEs in China went bankrupt during the crisis, and the remaining businesses suffered from severe capital shortages.

Yazdanfar and Öhman (2019) examined the 2008-2015 periods of SMEs in Sweden and determined that the financial distress of the enterprises was caused by macroeconomic conditions such as the global financial crisis, and especially by business-specific factors (prior performance, financial leverage and financial problems). Zubair, Kabir and Huang (2020), in their study examining the crisis period (2008-2009) and post-crisis period (2010-2012) of SMEs in the Netherlands, found that the investments of enterprises decreased in both periods, and that bank financing played a critical role in business investments during the crisis. They found that both internal and external financing were effective in investments in the post-crisis period.

With the Covid-19 becoming a global epidemic in 2020, studies on the effect of Covid-19 on businesses have intensified in the literature. Kottika et al.,(2020) stated that although businesses have the opportunity to explore foreign market opportunities in the economic crisis, it will be very difficult to find international markets during the Covid-19 period. In the study, it is emphasized

that market-oriented and entrepreneurial orientation approaches will be important for SMEs to compete effectively in the Covid-19 crisis and that these will increase the performance of businesses.

Lu et al., (2020) determined that during the pandemic period, SMEs in China had problems in cash flow because they had to undertake fixed expenses such as wages, rent, taxes, they could not get new orders, and they lost income because they could not sell goods and services.

Cowling and Brown (2020) determined that only 39% of SMEs in the UK strengthened their cash balance in the Covid-19 pandemic, and in this case, 61% of businesses may experience cash shortages, especially micro-enterprises are at risk.

Shafi, Liu, and Ren (2020) found that SMEs in Pakistan faced problems such as supply chain disruption, decreased sales and reduced profits during the pandemic process. In the study, it is stated that businesses adopt strategies such as obtaining loans from banks, closing the business partially or completely and reducing costs in order to cope with these problems.

2.7. The main reasons why the company is facing the crisis

In order for an event to be defined as a crisis for the company, it can be explained as having very serious consequences, threatening the core values of the company, having limited time to respond, and occurring unexpectedly (Xu and Li, 2013: 372). For this reason, it is stated that the main features of the crisis are serious consequences, threat, time pressure and surprise.

The threat is perceived as possible losses for the company. The crisis threatens the basic elements of organizations such as their goals and functioning order. The severity of the threat may vary depending on the type of crisis, the occurrence of the crisis, the situation of the companies and the reactions of the relevant target groups to the events. In general, the severity of the threat is an important factor in determining the consequences of the crisis, its evolution and ways to address it. What is also important in the crisis is that the pressure of time is felt very intensely and that there is an obligation to make quick decisions and implement them quickly. Surprise is the unexpected and sudden changes that disturb the company (Pira & Sohodol, 2010: 259-260). On the other hand, the crisis creates an environment of great uncertainty about where the organization and its employees will turn. This environment of disorganization that creates tension starts with the symptoms that emerged in the pre-crisis period in the company and continues until the period when the balance is restored (Pira and Sohodol, 2010: 259-260). As a result of the crisis that cannot be overcome, the material and moral losses of the company can reach irreversible dimensions.

It is the failure of the company to adapt to environmental changes in a timely and appropriate manner, ignorance and lack of communication, inadequate and faulty training activities that expose a company to a crisis situation. At the beginning of the crisis, there are many sources and reasons such as inadequate communication and incoordination, the transformation of risk factors into a crisis due to lack of information or misunderstandings, the lack of a company spokesperson, the emergence of contradictory information, the failure to use the right and appropriate mass media to convey the right information in a timely manner. It causes a prolongation of its duration (Netten and van Someren, 2001: 76-77). Some of the reasons that are effective in the emergence of the crisis can create bigger and more dangerous problems than others (Pira and Sohodol, 2010: 27). The other side of the crisis can be caused by factors within the company as well as by sociocultural factors outside the organization (Kazancı, 2007: 382). The existence of uncertainties in the society in which continuous changes are experienced causes an increase in complexity. Attitudes and behaviors that are not welcomed by the society can cause a crisis. In this case, the biggest savior of companies in order to protect and maintain their reputation is to communicate with their target audience. For this reason, it is of vital importance to plan crisis communication plans before, during and after the crisis (Chen et al., 2008: 66-73).

2.8. Factors affecting the crises experienced throughout the country

There are numerous factors that can be effective in the crisis of enterprises. Especially the negative conditions of the country's economy are also an important cause of crisis for businesses. Currency bottlenecks, foreign debt repayment problems, inability to import sufficient foreign capital, decrease in country credit ratings in international financial circles, unemployment

problems, etc. processes can be counted both as a result of the crisis and among the causes of the crisis (Sweezy-Magdoff, 1983: 26-27). Inflation, employment problems, contractions in emission volume, fluctuations in money markets, exchange rate fluctuations, uncertainties in the import and export regime, which are among the factors that create economic uncertainty and instability, cause uncertainties in all markets and therefore crisis (Silver, 1994: 114). The most rapid effects of crises on businesses are related to time. In other words, the most important element of crisis periods is time pressure. Time pressure has three important properties. First, time pressure increases the difficulty of tasks. Second, it shortens the time required to make a decision. Third, it directly affects the decision-making process and its results (Smith-Hayne, 1997: 97- 98).

Another effect of the crisis on businesses is the stress that arises with time pressure. Decisions taken under stress can increase the error rate, as well as prolong the resolution process of problems. Thus, business managers may lose their ability to solve problems and their self-confidence decreases. In addition, the working groups in the enterprise work more inefficiently and conflicts increase. The consequences of crises on businesses can be grouped under the following headings (Smith- Hayne, 1997: 97- 98):

- Centralization of management decisions,
- Pressure to make quick decisions,
- Decreased ability to adapt,
- Increased tension,
- Loss of trust,
- Unexpected costs.

During the crisis, management often cannot have sufficient time and alternatives for action in decision processes (Dincer, 1997: 284). Due to the rapid and continuous environmental changes, it becomes difficult to implement the planning, execution, organization, coordination and control processes, which are among the basic functions of management, in a programmed way. Since crisis periods do not allow long-term planning studies, studies can be continued with short-term programs. Due to the high level of uncertainty, management can only make short-term forecasts. In such cases, the necessity of taking quick decisions of the management arises and the ability to make quick decisions is of great importance.

2.9. Policies followed by enterprises during the crisis

Small business managers who want to come out of the crisis with less damage should be aware of the disadvantages and advantages brought by their organizational structures. For this reason, the second step in the internal analysis that needs to be done is the review of the organizational structure. At this stage, business managers have to re-determine the organizational features that can provide strategic advantage or cause strategic weakness. In this context, some of the features that can provide superiority for a small-scale business in every period are as follows:

- flexibility,
- Innovation,
- Limited Market and Product Lines,
- Informal Management and Personnel Relations (Scarborough-Zimmerer, 1989: 17).

In addition to such strategic advantages, some features that can be considered as weaknesses in every period are as follows:

- Dependency on a Single Manager in Decision Making,
- Structural Deficiencies,
- Adverse Competition Conditions (Brigham, 1989: 380).

As in all other businesses, crises require some changes in small businesses as well. In situations where there is change, the reaction to the change inevitably arises. The main reason for the reaction against change in organizations is that people perceive change as a threat to their security and status (Tompson, 1961: 19). Change initiatives may encounter some effective power centers that aim to limit the organization's ability to adapt to new conditions (Kaufman, 1971: 8).

In addition, the crisis of change has an increasing effect on the time pressure on employees (Hinterhubir-Krauthammer; 1995: 9).

In this framework, the necessity and importance of change should be communicated clearly and clearly to all employees (Karaer, 1990: 143). When it comes to change, analyzes should be done correctly and the business should not be dragged into a new crisis (Smorf-Vertinsky, 1977: 642-645).

2.10. Human resources policy in times of crisis

Human resource policies are guidelines that the organization wants the people it manages to adopt. These policies define the philosophy and values of the organization regarding how individuals should behave. In addition, how managers should behave in a situation related to human resources issues are determined by the principles derived from these. human resources or employment policies; It helps to adopt an approach in line with the organizational values of the organization regarding issues that concern people (Armstrong, 2006, p. 147). Human resources policies, which are examined in two classes as general and specific human resources policies (Armstrong, 2006, p. 148); aims to reduce costs and increase loyalty in times of crisis. Arthur (1994, p. 671) divided human resources policies into two basic classes as cost-reducing policies and commitment-enhancing policies. Cost-reducing policies are control policies that aim to increase efficiency by reducing employee costs. Policies that increase loyalty, on the other hand, aim to shape the attitudes and behaviors of the employees by creating a network between the goals of the organization and the employees.

Before explaining the human resources policies for downsizing, if we define it; Downsizing is to reshape the processes by examining the business activities together with the organizational structure, closing the departments that carry out activities outside the main subject of the organization (Dincher, 1998). Vahter et al. (1997) defined downsizing as reducing the number of employees in the organization, but they stated that it is an effective tactic that can negatively affect the health of other individuals who will continue to work in the organization. At the same time, they stated that downsizing can increase job insecurity, cause changes in the nature of the job, and cause deterioration in relations between management and employees. Cameron et al. (1991) defines organizational downsizing as simplification in all organizational processes, organizational functions and hierarchical structure together with the number of employees. De Vries and Balazs (1996) list the aims of downsizing as reducing bureaucracy, making faster decisions, communicating better, directing more intrapreneurial behavior, increasing productivity and earning more profits.

2.11. Crisis Plan in SME's

Managerial skills in individuals are one of the most important elements in times of crisis in businesses. Administrative skills that managers will apply in times of crisis are the skills that are most needed to take measures regarding the crisis in order to eliminate the panic created by the crisis in times of crisis. In addition, when a crisis occurs, it is necessary to identify the crisis first and the manager to determine the dimensions of the situation. Asking the right questions at the right time about the crisis is one of the greatest duties of the manager (Tack, 1994). In the event of a crisis, the implementation of a pre-prepared crisis management plan is of great importance for the enterprises to act in a planned manner and to save time. The most important way for crisis management to focus on the main issue without panicking during the crisis, to be effective in making decisions by comprehending the problems related to the crisis, and to ensure that employees learn how to respond to the encountered problem is to make a crisis plan in the pre-crisis period (Pira and Sohodol, 2004).

The crisis plan should be sufficient to prevent the situation that may arise suddenly from getting serious and should provide information about the factor or factors that may cause the crisis. In addition, the prepared crisis plan should be capable of meeting the problems encountered and situations that may be more serious than the current situation. At the same time, the crisis plan as a part of the strategic plan in the enterprises should have a clear purpose, be compatible with the

changing environmental conditions, and contain the necessary measures to overcome the crisis situations to be encountered with the least loss (Tutar, 2000). Creating a crisis plan in enterprises is basically carried out in order not to encounter a crisis or, if it is, to overcome the crisis with the least possible damage. In this direction, while crisis management basically emphasizes the importance of taking precautions, it is extremely important to take precautions to minimize the damage caused to the business during the crisis resolution phase and to take precautions so that the same situation does not recur as much as possible (Pira and Sohodol, 2004).

The implementation process of the crisis plan consists of the following steps:

- Establishment of the crisis management team
- Determining the dimensions of the crisis
- Determination of public relations policy
- Crisis communication plan
- Generation and implementation of crisis scenarios
- Evaluation of the plan.

In the crisis management process, planning for the crisis and carrying out the studies to prevent the crises can be achieved with a team work. If deemed necessary, experts in the field can be included in the crisis management team consisting of employees in the enterprise (Pira & Sohodol, 2004).

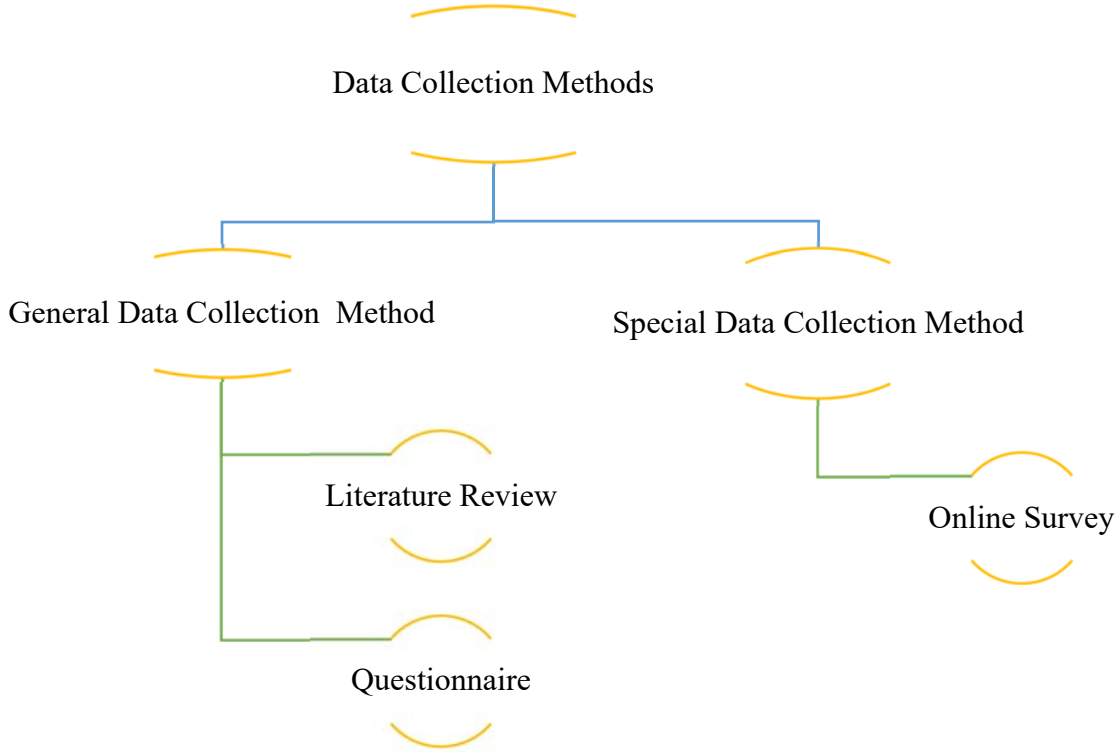
3. Methodology

3.1. Research Design

The purpose of this chapter is to discuss the research design and stages in chronological order. An online survey and document analysis for the data collection method was completed. Comparative analysis of general research questions by percentage, content analysis, reference statistics and reliability analysis were used to analyze the results. The main documents are collected from scientific articles, published books and Internet sources.

The research design used by the author for the purpose of this master's dissertation is shown below (see Figure 2):

Figure 2. Data Collection Method



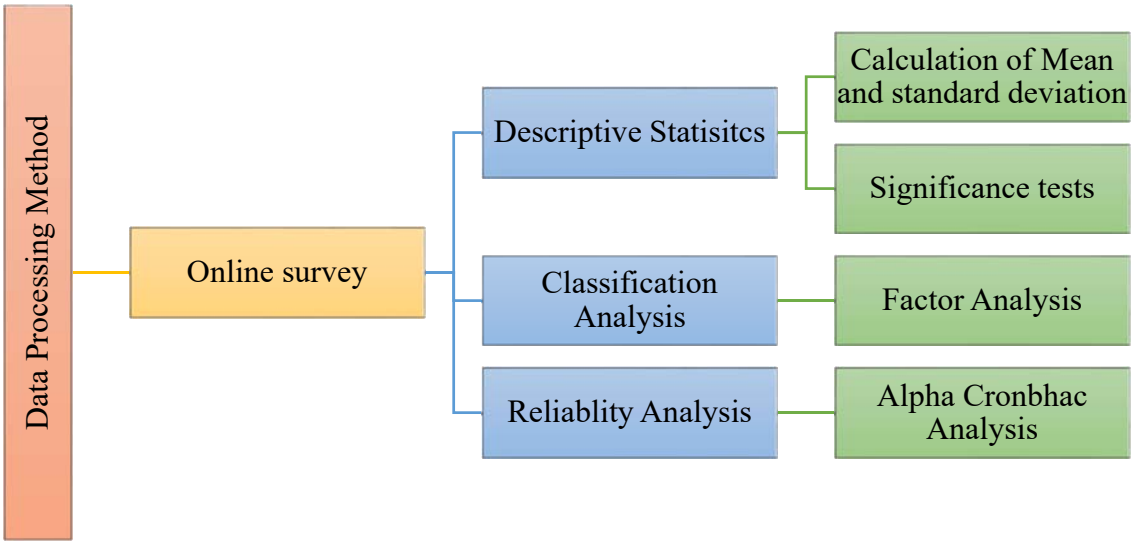
Source: The author's compilation for the Master thesis

The Data Collection Method is classified into a) General Data Collection Method and b) Special Data Collection Method. The above mentioned methods are further classified as follows:

- The General Data Collection Method is classified into
1. Literature review and
2. Questionnaire
- The Special Data Collection Method is classifies into
1. Online Survey

The figure below explains the data processing method used to analyze the data collected (see Figure 3).

Figure 3 Data Processing Method



Source: the author's compilation for the Master thesis

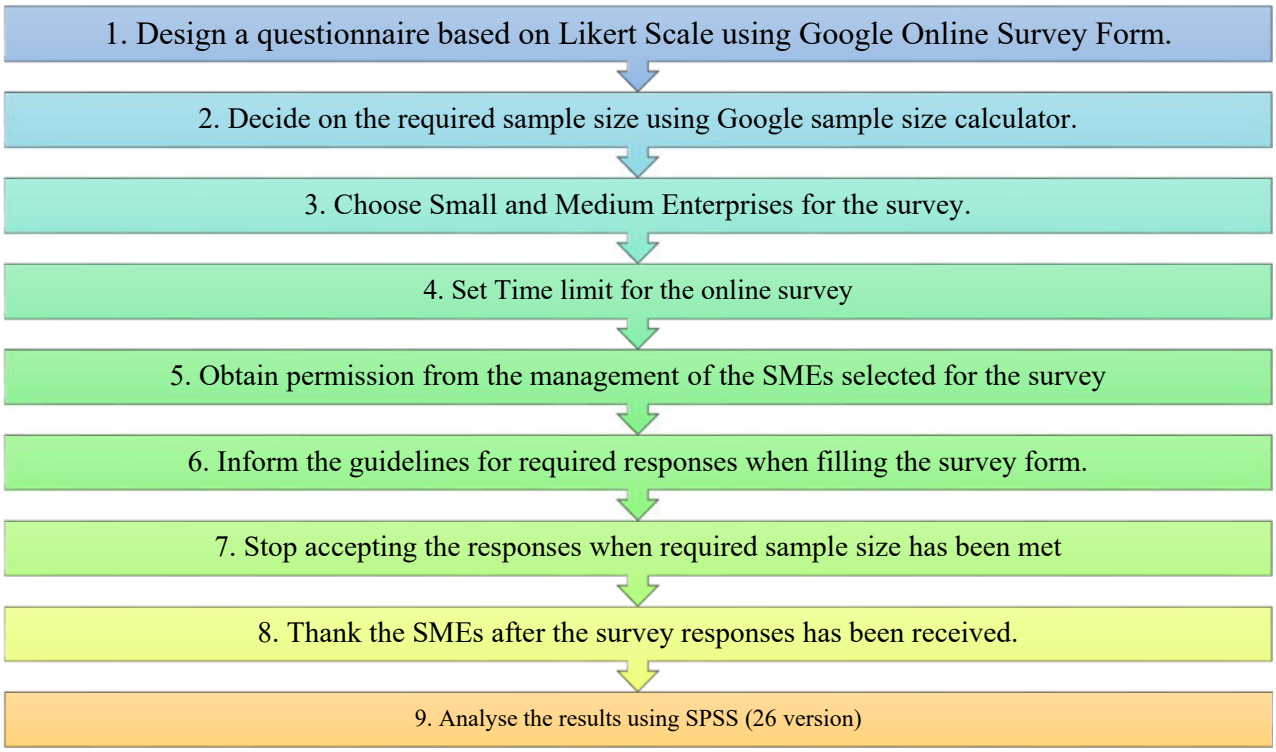
The figure above describes in detail the types of data processing forms used for research purposes. The author used the following methods to conduct an online survey: a) Descriptive statistics which includes calculation of Mean and Standard deviation. b) Descriptive Statistics and Significance tests. c) Classification Analysis which includes a) Factor Analysis d) Reliability Analysis which includes Alpha Cronbach Analysis.

3.2. Survey Design

Advantages of Online Survey:

Shown figure below (see Fig.4.) shows the sequence of steps followed in the survey design.

Figure 4 Survey design process



Source: the author's compilation for the Master thesis

The main purpose of the data collection and instructions for completing the questionnaire are given at the beginning of the survey. Mandatory questions are marked with a red star. The

answers require you to choose from several options. The first 3 questions in the questionnaire are intended to provide general information about the company. The next 5 questions are designed to determine the level of general awareness of the participating companies about the crisis and the causes and consequences of the crisis. The remaining 8 questions are based on the Linekert scale of the companies they represent during the crisis and the existence of crisis plans. The questions on the Linekert scale were answered in the form of "I completely agree", "I agree", "I am undecided", "I do not agree", "I do not agree at all". Respectively, when working on SPSS, those answers were indicated as "1", "2", "3", "4" and "5". As for the general questions, the answers to the first question are “1991-2002” - “1”, “2003-2007” - “2”, “2008-2015” - “3”, “2016-2022” - “4”. shown as.

In Question 2, the number of employees is recorded in the SPSS as follows:

a. 1-10 – “1”
b. 11-50 – “2”
c. 51-250 – “3”

The SPSS indicators for question 3 are as follows:

a. High school graduate – “1”
b. Bachelor’s degree – “2”
c. Master’s degree – “3”
d. Doctoral degree – “4”

The SPSS indicators for question 4 are as follows:

a. Technological inadequacies - “1”
b. Changes in legislation and laws – “2”
c. Insufficient export incentives – “3”
d. Incompetence of managers – “4”
e. The high amount of loans taken from banks – “5”
f. Lack of resources – “6”
g. Lack of proper business planning – “7”
h. Inability of the business to adapt to its environment – “8”

The SPSS indicators for question 5 are as follows:

a. Decline in sales – “1”
b. Increasing tension and conflict within the business – “2”
c. Experiencing financial problems – “3”
d. Weakening of company image – “4”
e. Decreased quality in products/services – “5”

The SPSS indicators for Question 6 are as follows:

a. General economic factors – “1”
b. Technological factors – “2”
c. Management problems of the company – “3”
d. Legal issues – “4”
e. Natural disasters – “5”
f. Competition problems – “6”

The SPSS indicators for question 7 are as follows:

a. Downsizing of operating capacity – “1”
b. Change in the organizational structure of the company – “2”
c. Evaluation of new market opportunities – “3”
d. Applying sales promotion methods – “4”

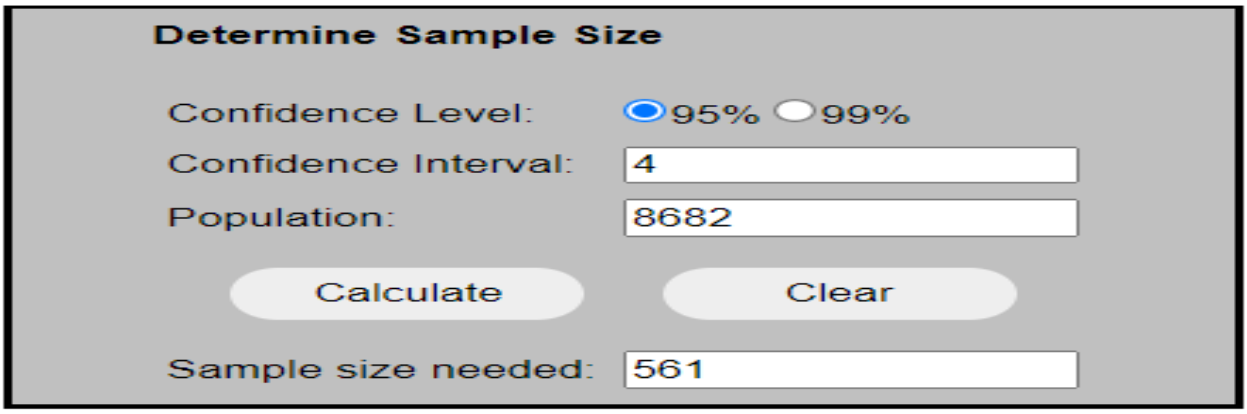
e. Benefiting from credit opportunities – “5”

The SPSS indicators for question 8 are as follows:
a. Dismissal of employees – “1”
b. Retirement – “2”
c. Reducing working times – “3”
d. Paid leave – “4”
e. No changes occurred – “5”

The main purpose of this section is to analyze the level of impact of the crisis on companies and the company's response to the crisis.

In the next step, a sample calculator from Google was used and the size of the sample was decided. An easy calculation was performed by pressing a two-part button. The image of the sample size calculator with the input provided for the purpose of this research is shown below:

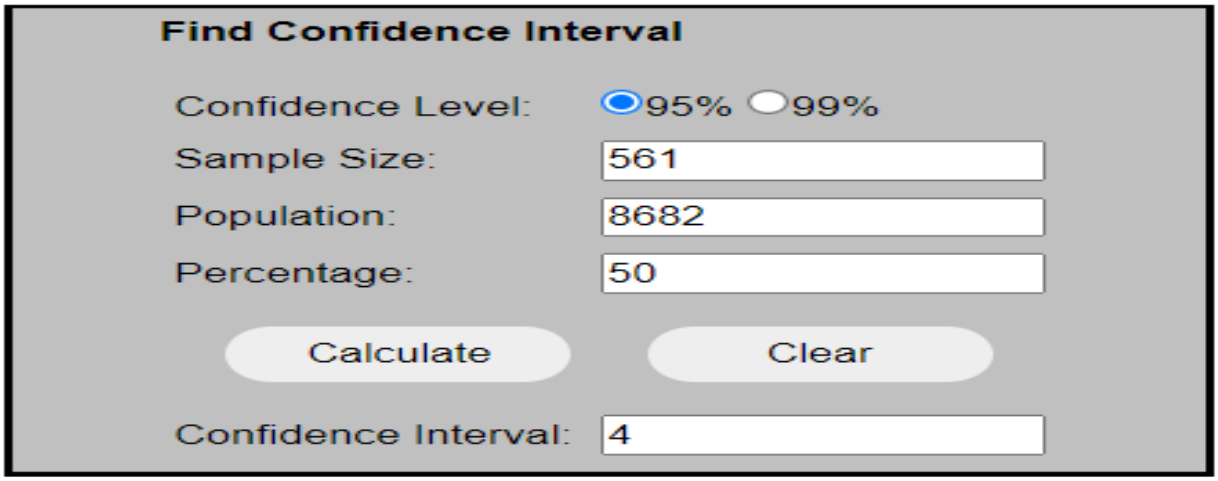
Figure 5 Sample size calculation



Source: the author’s results for sample size calculation

The population size is 8682 (https://www.stat.gov.az/source/entrepreneurship/, 2021). The details mentioned above were provided to calculate by clicking on the Calculate tab. The sample size required was calculated by the sample size calculator to be 561.

Figure 6 Confidence Interval Calculator



Source: the author’s results for Confidence Interval calculation

In fact, we needed the responses of at least 561 companies to investigate the anti-crisis measures taken by small and medium-sized businesses in the country. It is this factor that has led to a decline in the reliability of the results obtained in our work.

During the Covid-19 period, which had a profound effect on international relations, interstate policies, domestic policies and business entities, several companies were surveyed due to the impossibility of conducting direct and interview surveys, but the desired results could not be obtained. Because some companies did not want to participate in the survey. Due to the pandemic, it was impossible to prevent it.

The time limit for research was set to be a period of 45 (forty-five) days. The companies were informed by e-mail and telephone conversation.

Achieving the desired sample size was not possible due to lack of material resources or insufficient attention of SMEs to dissertation research. The number of respondents was limited for the reasons mentioned above. That is why some entrepreneurs were asked to meet and participate in the survey. But all this was not enough and the online Google query answers tab was closed. This marks the end of response time to the online survey. The public relations of the participating companies and the staff who assisted in conducting the online survey are thanked by phone and e-mail for completing the online survey. The data was analyzed using SPSS 26 by IBM. The data was subjected to the following analysis: a) Comparative analysis of general research questions by percentage. b) Reliability analysis in which alpha Cronbach Analysis was calculated and c) classification Analysis in which factor analysis was calculated.

4. Findings and discussions

4.1. Data analysis

The data obtained by statistical survey were subjected to statistical analysis. The statistical analysis was done with SPSS (version 26.0). Calculation of Mean and Standard Deviation, Alpha Cronbach analysis and factor analysis were done.

In all statistical analyzes used within the scope of the research, the level of significance was accepted as 0.05 and all the results were tested in two ways. Principal Components Method was used in all factor analysis. No rotation method was used to determine the factor numbers, but factor analysis was performed using the Direct Oblimin Rotation Method after the factor numbers were determined (Carpenter, 2018).

The Kaiser-Meyer-Olkin (KMO) sample adequacy test was used to test the suitability of the data set for factor analysis (Carpenter, 2018). Although the criterion value sought for the KMO value was greater than 0.50 and the Bartlett test result was significant, the interpretation of the KMO value was made using Table 1, and a KMO value greater than 0.60 was accepted as the criterion (Fields, 2002; Sarstedt et al. Mooi, 2014; Carpenter, 2018).

Table 22 KMO Threshold Values

KMO Value	Interpretation	Value	Interpretation
<0,50	Unacceptable	0,70-0,79	Good
0,50-0,59	Bad	0,80-0,89	Very good
0,60-0,69	Mediocre	>0,90	wonderful

Source: Sarstedt and Mooi 2014:208

After the data were grouped according to the scales they belonged to, their suitability for factor analysis was tested. Correlation values of each expression were checked in accordance with factor analysis and the correlation threshold value was accepted as 0.90 (Field, 2018). Tabachnick and Fidell (2013) state that the level of the determinant being close to zero in the correlation matrix created between the statements indicates the existence of the multicollinearity problem to that extent. For this reason, a determinant value greater than 0.00001 was taken as a multicollinearity criterion (Field, 2018). As a criterion of discriminant validity, each expression in the correlation matrix was collected under a single factor, factors did not receive cross-loading, and the factor load value under another factor was less than 0.70 (Field, 2018).

0.50 was taken as the critical value for the individual suitability of each expression. Statements below this value will be removed from the study and factor analysis will be continued in that way. In inverse image correlation, this value (0.50) was accepted as the critical value and expressions below this value will be excluded from the study (Hair et al., 2010). The average variance value explained as a result of the factor analysis of each scale is expected to be ≥0.50 (Field, 2018).

Although it is recommended to use Confirmatory Factor Analysis (CFA) with a different sample to confirm the dimensions found as a result of Exploratory Factor Analysis (EFA) in scale development studies, only EFA was used in our study, considering that using only EFA was also sufficient (Cabrera- Nguyen, 2010). While determining the number of factors, the numerical Eigen value (Eigen value> 1), the visual scree plot graphic and the fact that the expressions collected under the factors are related to the same concept were taken as reference. The naming of the dimensions was made by looking at the expressions collected under each factor.

The table below was used to interpret the Cronbach's alpha value.

Table 23 Cronbach Alpha Confidence Coefficients and Interpretation

Cronbach α	Comment	Cronbach α	Comment
≥0.9	Perfect	0.6≤α<0.7	Acceptable
0.7≤α	Good	0.5≤α<0.6	Weak

		α<0.5	Unacceptable

Source: Cabrera- Nguyen, 2010.

The total number of survey questions in the questionnaire was set at 8. Question 1, although general in nature, is in itself formulated with a certain regularity. The periods in Question 1, when the history of the company was established, will help us to form an overview of the serious changes taking place in Azerbaijan and the number of new firms created against the background of these changes. Thus, between 1991 and 2002, Azerbaijan gained new independence and was a country with a wide range of privatization programs, legislative problems and, most importantly, attempts to erase the traces of war. With the coming to power of Ilham Aliyev in 2003, the process of globalization by sectors was accelerated by applying new directions on previous systems on both economic, social and political platforms. Although the global crisis of 2008 did not have a significant impact on Azerbaijan, 2003-2007 was considered a separate period, taking into account the general features of the analysis. Under the influence of oil revenues, rapid dynamic development until 2015 was observed both in the country's economy and in individual businesses. For these reasons, the second period mentioned in the questionnaire covered the years 2008-2015. At the end of 2014 and the beginning of 2015, the sharp fall in market prices for oil led to the devaluation of the Azerbaijani manat. In 2016, a new economic system was introduced, under which measures to stimulate the development of the non-oil sector reached their peak compared to previous periods. Due to the impossibility of obtaining full information about the effects of the Covid-19 pandemic, which began in 2020, and its consequences, the last period in the questionnaire was marked as 2016-2022.

Table 24 History of the company

	1991-2002		2003-2007		2008-2015		2016-2022	
	N	%	N	%	N	%	N	%
When was the company founded?	12	27	6	13	8	18	19	42

Source: The author’s results for calculation using SPSS software

As can be seen from the table, most of the companies surveyed were established in 2016-2022. Another interesting factor is the presence of companies established in 1991-2002 in the second place. This indicator will also allow us to see the responses of companies with extensive experience in crises.

The following table shows the number of employees. These indicators are the number of employees in micro, small and medium enterprises adopted by law.

Table 25 Number of employees

	1-10		11-50		51-250	
	N	%	**N**	%	**N**	%
How many employees are working?	**17**	38	**19**	42	**9**	20

Source: The author’s results for calculation using SPSS software

As can be seen from the table, most of the companies surveyed in our survey are small companies. The lowest rate is for medium-sized companies, whose share is 20%.

The following table shows the level of education of managers.

Table 26. Level of education of managers

	High school graduate	Bachelor’s degree	Master’s degree	Doctoral degree

	N	%	N	%	N	%	N	%
When was the company founded?	5	11	20	44	17	38	3	7

Source: The author's results for calculation using SPSS software

As can be seen from the table, almost 44% of the company executives surveyed in our survey have a bachelor's degree. In second place are managers with a master's degree (38%). The lowest rate is the percentage of managers with a doctoral degree (7%).

The following table shows the main reasons why companies face the crisis.

Table 27 Reasons for the company to face the crisis

	Technological inadequacies		Changes in legislation and laws		Insufficient export incentives		Incompetence of managers		The high amount of loans taken from banks		Lack of resources		Lack of proper business planning		Inability of the business to adapt to its environment	
What is the root cause of the company facing crisis?		8		6				3				6				6

Source: The author's results for calculation using SPSS software

As can be seen from the table, in the survey of the companies surveyed, the most common reasons for the crisis were technological deficiencies (18%). The answers to "Changes in legislation and legislation", "Incompetence of managers", "Lack of resources" and "Inability of business to adapt to the environment" are almost equal. The lowest indicator is "Insufficient export incentives" (4%). From the answers given, it can be seen that although the domestic competition system is imperfect, the problems with exports are very low.

The following table shows the negative effects of the crisis on entrepreneurship.

Table 28 Negative effects of the crisis on entrepreneurship

	Decline in sales		Increasing tension and conflict within the business		Experiencing financial problems		Weakening of company image		Decreased quality in products/services	
	N		N	%	N	%	N	%	N	%
What was the most negative impact of the crisis on business activities?	11	4	7	16	17	38	6	3	4	9

Source: The author's results for calculation using SPSS software

As can be seen from the table, the most common reasons for facing the crisis in the survey of the companies surveyed were related to financial problems (38%). The lowest interest rate is due to the decline in the quality of the product or service. It is clear from the answers given that

there are many problems during the crisis, but these cases are not reflected in the quality indicators of products or services.

The following table shows the factors influencing the crisis in Azerbaijan.

Table 29 Factors affecting the crisis in Azerbaijan

	General economic factors		Technological factors		Management problems of the company		Legal issues		Natural disasters		Competition problems	
	N		1		N				1		N	%
What were the factors affecting the crisis experienced throughout the country (Azerbaijan)?	21	7	1	6	5	1			4		5	11

Source: The author's results for calculation using SPSS software

As can be seen from Table 8, the largest percentage of the factors influencing the crisis in question falls on general economic factors (47%). The lowest interest rates are due to natural disasters (9%) and legal issues (7%). It is clear from the answers given that companies are dissatisfied with the general economic factors in the country. This can be considered acceptable both in previous crises and in the modern era of pandemics.

The following table shows the company's policy during the crisis.

Table 30 The company's policy during the crisis

	Downsizing of operating capacity		Change in the organizational structure of the company		Evaluation of new market opportunities		Applying sales promotion methods		Benefiting from credit opportunities	
	N		N	%	N	%	N	%	N	%
What were the factors affecting the crisis experienced throughout the country (Azerbaijan)?	9	20	7	16	16	36	8	18	5	11

Source: The author's results for calculation using SPSS software

As can be seen from Table 9, the largest percentage of the company's policies during the crisis falls on the New Market Opportunity Assessment (36%). The lowest interest rate is due to the use of credit opportunities by companies (11%). It is clear from the answers that companies are trying to use crises as an opportunity. This situation can be considered very important.

The table below shows the company's human resources policy during the crisis.

Table 31 The company's human resources policy during the crisis

	Dismissal of employees		Retirement		Reducing working times		Paid leave		No changes occurred	
	N		N	%	N	%	N	%	N	%

What was the human resources policy during the crisis?	9	10	5	11	5	11	7	16	19	42

Source: The author's results for calculation using SPSS software

As can be seen from Table 10, the largest percentage of the company's human resources policies during the crisis was the "No change" response (42%). Other indicators are very close to each other. From the answers given, it can be seen that companies pay more attention to human resources policy during crises against the background of commitment to the company, and here they use the crisis as an opportunity.

Reliability Analysis: All Scale Variables

Table 32 Case Processing Summary

Case Processing Summary			
		N	%
Cases	Valid	45	100.0
	Excluded[a]	0	.0
	Total	45	100.0
a. Listwise deletion based on all variables in the procedure.			

Source: The author's results for calculation using SPSS software

In the above given table of Case progressing summary there are total of 45 cases with two variables of cases valid and excluded are given as follows: a) The first variable is 'Valid case' is 100 percent. b) So there is no chance for Excluded cases i.e. 0 percent.

The above table shows the sample size to be 45 and no items were deleted.

Table 33 Reliability Statistics

Reliability Statistics

Cronbach's Alpha	N of Items
.851	8

Source: The author's results for calculation using SPSS software

The above table shows that there is high consistency within the variables because the Cronbach's Alpha value is 0.851. The total number of items in the questionnaire was 8. As can be seen from Table 2, our results are sufficient to perform the analyzes.

Table 34 Item Statistics

Item Statistics				
S.No.	**Item**	**Mean**	**Std. Deviation**	**N**
1.	Your company is very affected by the crisis	2.3556	1.11101	45
2.	The company has done some work to manage the crisis	2.0889	.90006	45
3.	During the crisis, the company followed a set policy	2.3111	.94922	45
4.	The company has a crisis management strategy / plan	2.4222	1.09729	45

5.	Due to the uncertainty, the plans are not short-term, but long-term	2.5333	.99087	45
6.	Plans were kept flexible during the crisis	2.2667	1.00905	45
7.	After the crisis, the company's reputation and production capacity expanded	2.5333	1.01354	45
8.	The crisis has led to an increase in the flow of information within the enterprise	2.4444	1.05649	45

Source: The author's results for calculation using SPSS software

The table above shows that the mean value for all variables is very close to each other (range 2.0889-2.5333) and the sample size denoted by N for the purpose of this master's dissertation is 45. This response model may be related to the inadequacy of respondents from different walks of life. Only a few examples of the same socio-economic status were included in the survey. There are a total of eight variables in the table. Now let's take a closer look at the indicators for each variable and comment on the results. a) The first variable is "Your company is very affected by the crisis." The standard deviation is 1.11101. b) The second variable is "The company has done some work to manage the crisis." In this case, the standard deviation is 0.90006. c) The third variable is "During the crisis, the company followed a set policy". The standard deviation is 0.94922. d) The fourth variable is "The company has a crisis management strategy / plan". The standard deviation is 1.09729. e) The fifth variable is "Plans are long-term, not short-term, due to uncertainty." The standard deviation is 0.99087. f) The sixth variable is "Plans were kept flexible during the crisis". The standard deviation is 1.00905. g) Seventh variable "After the crisis, the company's reputation and production capacity expanded." The standard deviation is 1.01354. h) Eighth variable "The crisis has led to an increase in the flow of information within the enterprise." The standard deviation is 1.05649.

Table 35. Item Scale statistics

		Item-Total Statistics			
S.No.	**Item**	**Scale Mean if Item Deleted**	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
1.	Your company is very affected by the crisis	16.6000	26.382	.428	.855
2.	The company has done some work to manage the crisis	16.8667	24.845	.763	.815
3.	During the crisis, the company followed a set policy	16.6444	26.143	.562	.837
4.	The company has a crisis management strategy / plan	16.5333	23.436	.740	.814
5.	Due to the uncertainty, the plans are not short-term, but long-term	16.4222	26.022	.543	.839
6.	Plans were kept flexible during the crisis	16.6889	24.946	.648	.826
7.	After the crisis, the company's reputation and production capacity expanded	16.4222	25.886	.542	.839
8.	The crisis has led to an increase in the flow of information within the enterprise	16.5111	25.619	.539	.840

Source: The author's results for calculation using SPSS software

The table above shows that when an item is deleted, the Average Scale is almost equal to all the variables (in the range 16,4222-16,8667) and there are only eight variables in the table. Now lets see in details the scores for each variable and interpret the results. a) The first variable is 'Your company is very affected by the crisis'. The Scale Variance if Item Deleted is 26,382,

the Corrected Item-Total Correlationis 0. 428 and the Cronbach's Alpha if Item Deleted is 0,855. b) The second variable is 'The company has done some work to manage the crisis'. The Scale Variance if Item Deleted is 24.845 , the Corrected Item-Total Correlationis 0.763 and the Cronbach's Alpha if Item Deleted is 0.815. c) The third variable is 'During the crisis, the company followed a set policy'. The Scale Variance if Item Deleted is 26.143, the Corrected Item-Total Correlation is 0.562 and the Cronbach's Alpha if Item Deleted is 0.837 d) The fourth variable is 'The company has a crisis management strategy / plan'. The The Scale Variance if Item Deleted is 23.436, the Corrected Item-Total Correlationis 0.740 and the Cronbach's Alpha if Item Deleted is 0.814 e) The fifth variable is 'The company has a crisis management strategy / plan'. The Scale Variance if Item Deleted is 26.022, the Corrected Item-Total Correlationis 0.543 and the Cronbach's Alpha if Item Deleted is 0.839. f) The sixth variable is 'Plans were kept flexible during the crisis'. The Scale Variance if Item Deleted is 24.946 , the Corrected Item-Total Correlationis 0.648 and the Cronbach's Alpha if Item Deleted is 0.826. g) The seventh variable is 'After the crisis, the company's reputation and production capacity expanded'. The Scale Variance if Item Deleted is 25.886, the Corrected Item-Total Correlationis 0.542 and the Cronbach's Alpha if Item Deleted is 0.839. h) The eighth variable is 'The crisis has led to an increase in the flow of information within the enterprise'. The Scale Variance if Item Deleted is 25.619, the Corrected Item-Total Correlationis 0.539 and the Cronbach's Alpha if Item Deleted is 0.840.

c) Factor Analysis:

Table 36 Descriptive Statics

				Descriptive Statistics
S.No	**Item**	**Mean**	**Std. Deviation**	**Analysis N**
1.	Your company is very affected by the crisis	2.3556	1.11101	45
2.	The company has done some work to manage the crisis	2.0889	.90006	45
3.	During the crisis, the company followed a set policy	2.3111	.94922	45
4.	The company has a crisis management strategy / plan	2.4222	1.09729	45
5.	Due to the uncertainty, the plans are not short-term, but long-term	2.5333	.99087	45
6.	Plans were kept flexible during the crisis	2.2667	1.00905	45
7.	After the crisis, the company's reputation and production capacity expanded	2.5333	1.01354	45
8.	The crisis has led to an increase in the flow of information within the enterprise	2.4444	1.05649	45

Source: The author's results for calculation using SPSS software

The table above shows that the mean for all variables is almost equal (in the range of 2.0889-2.5333) and the analysis for the N variable is the same for all variables (ie 45). Now lets see in details the scores for each variable. a) The first variable is 'Your company is very affected by the crisis' and the standard deviation is 1.11101 b) The second variable is 'The company has done some work to manage the crisis' and the standard deviation is 0.90006 c) The third variable is 'During the crisis, the company followed a set policy' and the standard deviation is 0.94922 d) The fourth variable is 'The company has a crisis management strategy / plan' and the standard deviation is 1.09729 e) The fifth variable is 'Due to the uncertainty, the plans are not short-term, but long-term' and the standard deviation is 0.99087 f) The sixth variable is 'Plans were kept flexible during the crisis' and the standard deviation is 1.00905. g) The seventh variable is 'After the crisis, the company's reputation and production capacity expanded' and the standard deviation is 1.01354. h) The eighth variable is 'The crisis has led to an increase in the flow of information within the enterprise' and the standard deviation is 1.05649.

The above table shows a diagonal value of 1.000 signifying there is correlation among the variables.

Table 37 KMO and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.791
Bartlett's Test of Sphericity	Approx. Chi-Square	141.245
	df	28
	Sig.	.000

Source: The author's results for calculation using SPSS software

The above table shows sampling adequacy is 0.791 which is a high value nearly equal to 1 and the significance value is 0.000 represents that data is suitable for factor analysis. And the hypothesis is satisfied. As we can see from Table 1, the acceptable level of KMO value is more than 0.50. Our result is considered good with 0.791.

Table 38 Communalities

Communalities			
S.No	Variables	Initial	Extraction
1.	Your company is very affected by the crisis	1.000	.750
2.	The company has done some work to manage the crisis	1.000	.751
3.	During the crisis, the company followed a set policy	1.000	.649
4.	The company has a crisis management strategy / plan	1.000	.741
5.	Due to the uncertainty, the plans are not short-term, but long-term	1.000	.622
6.	Plans were kept flexible during the crisis	1.000	.591
7.	After the crisis, the company's reputation and production capacity expanded	1.000	.436
8.	The crisis has led to an increase in the flow of information within the enterprise	1.000	.514
Extraction Method: Principal Component Analysis.			

Source: The author's results for calculation using SPSS software

The above Communalities table shows that Initial is same (i.e.1.000) for all the eight variables of this table. Now lets see in details the scores for each variable. a) The first variable is 'Your company is very affected by the crisis' and the Extraction value is 0.750 b) The second variable is 'The company has done some work to manage the crisis' and the Extraction value is 0.751 c) The third variable is 'During the crisis, the company followed a set policy' and the Extraction value is 0.649 d) The fourth variable is 'The company has a crisis management strategy / plan' and the Extraction value is 0.741 e) The fifth variable is 'Due to the uncertainty, the plans are not short-term, but long-term' and the Extraction value is 0.622 f) The sixth variable is 'Plans were kept flexible during the crisis' and the Extraction value is 0.591. g) The seventh variable is 'Due to the uncertainty, the plans are not short-term, but long-term' and the Extraction value is 0.436 h) The eighth variable is 'Plans were kept flexible during the crisis' and the Extraction value is 0.514.

If we pay attention to the indicators in the table above, we see that the required variance index (Ext.> 0.4) is paid for all questions. But the most reliable indicator of the level of variance is in Question 2. Thus, all values are subtracted. Thus, it is suitable for the solution.

Table 39 Total variance

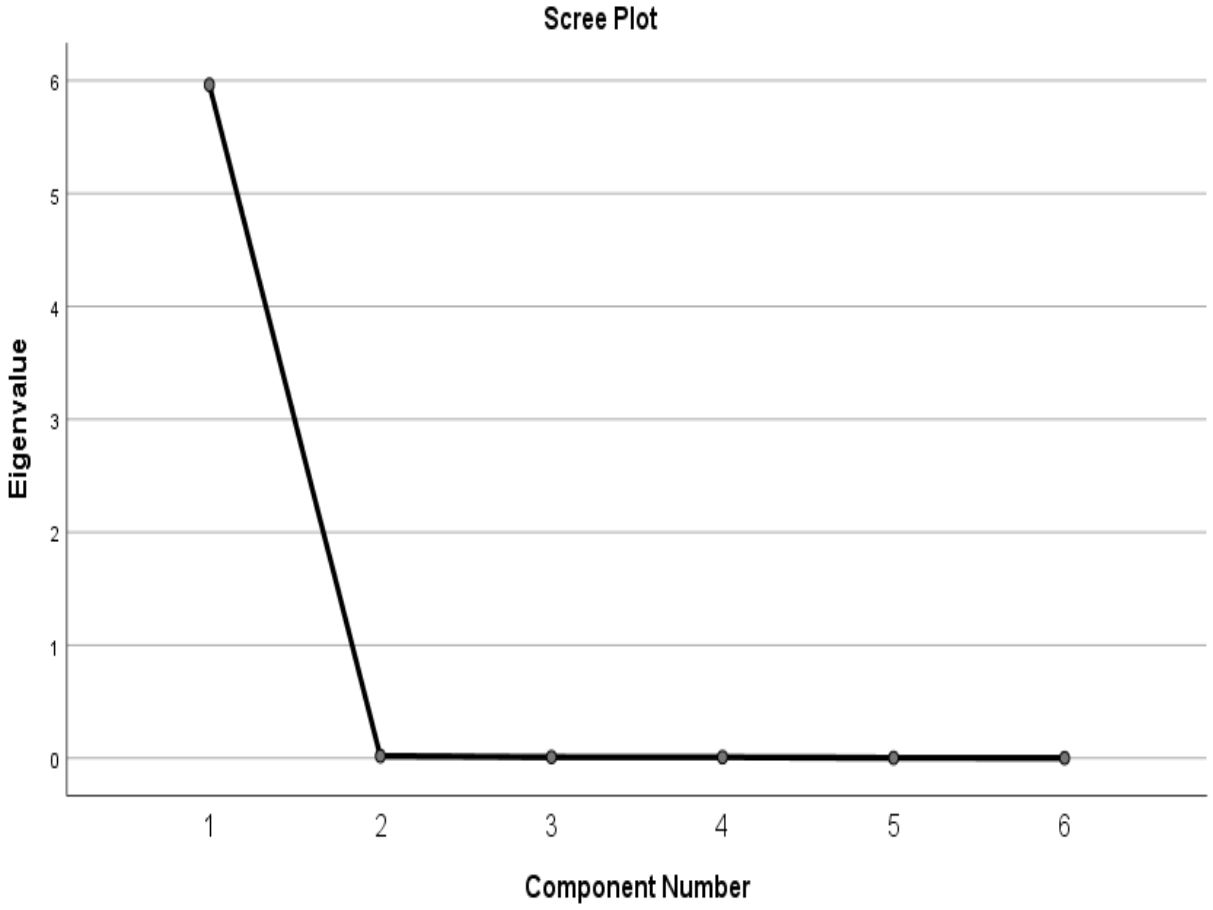
Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1.	4.023	50.283	50.283	4.023	50.283	50.283
2.	1.031	12.893	63.177	1.031	12.893	63.177
3.	.729	9.111	72.288			
4.	.642	8.029	80.317			
5.	.604	7.556	87.873			
6.	.503	6.287	94.160			
7.	.287	3.582	97.742			
8.	.181	2.258	100.000			
Extraction Method: Principal Component Analysis.						

Source: The author's results for calculation using SPSS software

The above Communalities table shows that total variance for all the eight components of this table. Now let us see in details the scores for each variable. a) In the first component Initial Eigen value is 4.023 and the percentage of Variance is 50.283 and cumulative percentage 50.283. The Extraction Sums of Squared Loadings is 4.023 and percentage of Variance is 50.283 and cumulative percentage is 50.283 b) In the second component Initial Eigen value is 1.031 and the percentage of Variance is 12.893 and cumulative percentage 63.177. c) In the third component Initial Eigen value .729 and the percentage of Variance is 9.111 and cumulative percentage 72.288. d) In the fourth component Initial Eigen value .642 and the percentage of Variance is 8.029 and cumulative percentage 80.317. e) In the fifth component Initial Eigen value .604 and the percentage of Variance is 7.556 and cumulative percentage 87.873. f) In the sixth component Initial Eigen value .503 and the percentage of Variance is 6.287 and cumulative percentage 94.160. g) In the seventh component Initial Eigen value .287 and the percentage of Variance is 3.582 and cumulative percentage 97.742. h) In the eighth component Initial Eigen value 0.181 and the percentage of Variance is 2.258 and cumulative percentage 100.000.

The table above shows that we have two values with a specific value greater than 1, and the variance is within the required percentage with a value of 50.283%.

Figure 7. Screen plot



Source: The author's results for calculation using SPSS software

The figure shows only two component to be above the Eigen value of 1. And the other components are below 1.

Table 40. Component Matrix

Component Matrix[a]			
S.No.	**Items**	**Component**	
		1	**2**
1.	The company has done some work to manage the crisis	.840	.215
2.	The company has a crisis management strategy / plan	.839	-.194
3.	Plans were kept flexible during the crisis	.766	
4.	During the crisis, the company followed a set policy	.682	-.428
5.	Due to the uncertainty, the plans are not short-term, but long-term	.659	-.433
6.	After the crisis, the company's reputation and production capacity expanded	.653	
7.	The crisis has led to an increase in the flow of information within the enterprise	.640	.323
8.	Your company is very affected by the crisis	.541	.677
Extraction Method: Principal Component Analysis.			

a. 2 components extracted.	

Source: The author's results for calculation using SPSS software

The Component Matrix above shows the following data structure for all eight variables in this table. Now let's take a closer look at the points for each variable. a) The first variable is "The company has done some work to manage the crisis" and the value of component 1 is 0.840 and the value of component 2 is 0.215. b) The second variable is 'The company has a crisis management strategy / plan' and the value of component 1 is 0.839 and the value of component 2 is -0.194. c) The third variable 'Plans were kept flexible during the crisis' and the value of component 1 is 0.766 and the value of component 2 is 0.000. d) The fourth variable, 'The company has followed a defined policy during the crisis', has a component value of 0.682 and a component value of -0.428. e) The fifth variable is "Plans are long-term, not short-term due to uncertainty" and the value of component 1 is 0.659 and the value of component 2 is -0.433. f) The sixth variable is "After the crisis, the company's reputation and production capacity has expanded" and the value of component 1 is 0.653 and the value of component 2 is 0.000. g) The seventh variable is "The crisis has led to an increase in the flow of information within the enterprise" and the value of component 1 is 0.640 and the value of component 2 is 0.323. h) The eighth variable is "Your company is very affected by the crisis" and the value of component 1 is 0.541 and the value of component 2 is 0.677.

Since there is no variable to be deleted, only one component was extracted. Hence there was no rotated component for my factor analysis method.

Table 41 Rotated Component Matrix

Rotated Component Matrix[a]		
	Component	
Items	**1**	**2**
During the crisis, the company followed a set policy	.798	.106
Due to the uncertainty, the plans are not short-term, but long-term	.784	.088
The company has a crisis management strategy / plan	.770	.386
After the crisis, the company's reputation and production capacity expanded	.565	.342
Plans were kept flexible during the crisis	.546	.541
Your company is very affected by the crisis	-.017	.866
The company has done some work to manage the crisis	.508	.702
The crisis has led to an increase in the flow of information within the enterprise	.286	.658
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		

Source: The author's results for calculation using SPSS software

The Rotated Component Matrix above shows the following data structure for all eight variables in this table. Now let's take a closer look at the points for each variable. a) The first variable is "The company has done some work to manage the crisis" and the value of component 1 is 0.798 and the value of component 2 is 0.106. b) The second variable is 'The company has a crisis management strategy / plan' and the value of component 1 is 0.784 and the value of component 2 is 0.088. c) The third variable 'Plans were kept flexible during the crisis' and the value of component 1 is 0.770 and the value of component 2 is 0.386. d) The fourth variable, 'The company has followed a defined policy during the crisis', and the value of component 1 is 0.565 and the value of component 2 is 0.342. e) The fifth variable is "Plans are long-term, not short-term due to uncertainty" and the value of component 1 is 0.546 and the value of component 2 is 0.541. f) The sixth variable is "After the crisis, the company's reputation and production capacity has

expanded" and the value of component 1 is -0.017 and the value of component 2 is 0.866. g) The seventh variable is "The crisis has led to an increase in the flow of information within the enterprise" and the value of component 1 is 0.508 and the value of component 2 is 0.702. h) The eighth variable is "Your company is very affected by the crisis" and the value of component 1 is 0.286 and the value of component 2 is 0.658.

Table 42 Component Score Coefficient Matrix

	Component Score Coefficient Matrix		
		Component	
S. No.	Items	1	2
1.	Your company is very affected by the crisis	-.316	.590
2.	The company has done some work to manage the crisis	.027	.294
3.	During the crisis, the company followed a set policy	.396	-.211
4.	The company has a crisis management strategy / plan	.281	-.012
5.	Due to the uncertainty, the plans are not short-term, but long-term	.394	-.218
6.	Plans were kept flexible during the crisis	.105	.171
7.	After the crisis, the company's reputation and production capacity expanded	.186	.031
8.	The crisis has led to an increase in the flow of information within the enterprise	-.078	.343
	Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		

Source: The author's results for calculation using SPSS software

The above table of Component Score Coefficient Matrix shows component score for all the eight variables of this table. Now lets see in details the scores for each variable. a) The first variable is 'Your company is very affected by the crisis' and component 1 was -0.316 and component 2 was 0.590. b) The second variable is 'The company has done some work to manage the crisis' and component 1 was 0.027 and component 2 was 0.294. c) The third variable is 'During the crisis, the company followed a set policy' and component 1 was 0.396 and component 2 was -0.211. d) The fourth variable is 'The company has a crisis management strategy / plan' and component 1 was 0.281 and component 2 was -0.012. e) The fifth variable is 'Due to the uncertainty, the plans are not short-term, but long-term' and component 1 was 0.394 and component 2 was -0.218. f) The sixth variable is 'Plans were kept flexible during the crisis' and component 1 was 0.105 and component 2 was 0.171. g) The seventh variable is 'After the crisis, the company's reputation and production capacity expanded' and component 1 was 0.186 and component 2 was 0.031. h) The eighth variable is 'The crisis has led to an increase in the flow of information within the enterprise' and component 1 was -0.078 and component 2 was 0.343.

The table above does not take into account data loss, as it shows a linear correlation between all components.

Table 43. Component Score Covariance Matrix

Component Score Covariance Matrix		
Component	1	2
1	1.000	.000
2	.000	1.000
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.		

Source: The author's results for calculation using SPSS software

There are two extracts, and their contact matrices are marked as 1,000 and 0,000, respectively.

Significance tests

The chi-square test is used for variables defined as qualitative (discrete-categorical). In addition, continuous variables defined by measurement can be converted into discrete variables by qualifying them as more or less than a certain value, and the chi-square test can be applied to this transformed variable. The chi-square test is a test based on whether the difference between observed frequencies (OF) and expected frequencies (EF) is statistically significant (Last, 2001: 29).

"Pearson's chi-square test" is the best known "chi-square test", and the word "chi-square-test" is often used for Pearson's chi-square test. Yates's continuity correction application is calculated by subtracting 0.5 from the "observed value - expected value" difference for each cell, and with this method, a smaller chi-square value and therefore a larger p value is obtained compared to Pearson's method. If the sample size is small, Fisher's exact test is used instead of Pearson's chi-square test In Pearson's chi-square test, it is desirable that the EFs in the cells are not too small. It has been reported that if EFs are smaller than a certain number, this test should not be used and another appropriate test should be selected (Dawson and Trapp, 2001: 148-150).

In order to reduce the difference between the calculated chi-square value and the theoretical chi-square value, it is generally recommended to perform Yates correction in four-eyed layouts. However, Pearson's chi-square test is frequently used in scientific literature, but Fisher's exact test should be chosen instead of this test, especially when conditions are met. In multi-well layouts (degrees of freedom greater than 1), more than 20% of the cells must have no less than 5 EF and no less than 1 EF in any cell for the test to be used. If this assumption cannot be fulfilled, some of the rows or columns in the table should be combined and the said assumption should be tried to be met. It is not appropriate to perform a chi-square analysis without providing this situation (Jekel, 1996: 145-148).

A cross table showing the number of units in which subcategories of two variables with more than two categories are observed together is called an rxc table. The method to be used may vary according to the ratio of the calculated theoretical frequencies to the number of those less than 5 in the total. If the percentage of less than 5 theoretical frequencies calculated for each eye is less than 20%, the Pearson chi-square test should be used, and if it is greater than 20%, the exact method should be used (Jekel, 1996: 145-148).

In the table below, if we test the dependence between the establishment date of the company and the company's having a crisis management strategy/plan with Pearson chi-square analysis, we get the following results.

Table 44 Association between the establishment date of the company and the company's having a crisis management strategy/plan

Crosstab								
			The company has a crisis management strategy / plan					
			1.00	2.00	3.00	4.00	5.00	Total
When was the company founded?	1.00	Count	2	4	2	3	1	12
		Expected Count	2.7	4.3	2.7	2.1	.3	12.0
	2.00	Count	3	1	2	0	0	6
		Expected Count	1.3	2.1	1.3	1.1	.1	6.0
	3.00	Count	0	5	2	1	0	8
		Expected Count	1.8	2.8	1.8	1.4	.2	8.0
	4.00	Count	5	6	4	4	0	19
		Expected Count	4.2	6.8	4.2	3.4	.4	19.0

Total	Count	10	16	10	8	1	45
	Expected Count	10.0	16.0	10.0	8.0	1.0	45.0

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.456[a]	12	.490
Likelihood Ratio	13.438	12	.338
Linear-by-Linear Association	.339	1	.561
N of Valid Cases	45		
a. 19 cells (95.0%) have expected count less than 5. The minimum expected count is .13.			

When this result is examined, it is seen that there is no relationship between the establishment date of the company and the existence of a crisis management strategy/plan, according to the Pearson chi-square statistics $\chi 2$ = 11,456, sd = 12, p = 0.490. However, as stated at the bottom of the analysis result table, the rate of the number of cells with a theoretical value less than 5 was found to be 95.0%, and the Pearson chi-square test result is not reliable since this rate exceeds 20%.

In this case the exact test should be used. In previous installations of SPSS, Fisher testing was only possible in 2x2-state tables, whereas in recent installations the use of Fisher Chi-Square in larger state tables has been accepted. With the Full Tests module installed, the Crosstabs procedure can print the Fisher-Freeman-Halton full independence test when the contingency table is greater than 2x2 (https://www.ibm.com/support/pages/node/420335).

Table 24. Association between the establishment date of the company and the company's having a crisis management strategy/plan

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	11.456[a]	12	.490	.533		
Likelihood Ratio	13.438	12	.338	.458		
Fisher's Exact Test	11.043			.546		
Linear-by-Linear Association	.339[b]	1	.561	.591	.300	.036
N of Valid Cases	45					
a. 19 cells (95.0%) have expected count less than 5. The minimum expected count is .13.						
b. The standardized statistic is -.582.						

Source: The author's results for calculation using SPSS software

As can be seen from the table, the result of the Fisher test was 0.546. Since the indicator is greater than 0.05, we can say that there is no connection between the history of the company and the fact that the company has a crisis plan.

If we test the dependence between the number of employees of the company and the company's having a crisis management strategy/plan in the table below, with Pearson chi-square analysis, we get the following results.

Table 25 Association between the number of employees of the company and the company's having a crisis management strategy/plan

Crosstab						
	The company has a crisis management strategy / plan					Total
	1.00	2.00	3.00	4.00	5.00	

How many employees are working?	1.00	Count	1	7	7	2	0	17
		Expected Count	3.8	6.0	3.8	3.0	.4	17.0
	2.00	Count	6	6	2	4	1	19
		Expected Count	4.2	6.8	4.2	3.4	.4	19.0
	3.00	Count	3	3	1	2	0	9
		Expected Count	2.0	3.2	2.0	1.6	.2	9.0
Total		Count	10	16	10	8	1	45
		Expected Count	10.0	16.0	10.0	8.0	1.0	45.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.886[a]	8	.273
Likelihood Ratio	10.814	8	.212
Linear-by-Linear Association	.722	1	.395
N of Valid Cases	45		

a. 13 cells (86.7%) have expected count less than 5. The minimum expected count is .20.

When this result is examined, it is seen that there is no relationship between the number of employees of the company according to the Pearson chi-square statistics $\chi 2 = 9.886$, $sd = 8$, $p = 0.273$ and the company's having a crisis management strategy/plan. However, as stated at the bottom of the analysis result table, the ratio of the number of cells with a theoretical value less than 5 was found to be 86.7%, and the Pearson chi-square test result is not reliable since this rate exceeds 20%. In this case the exact test should be used.

Table 26 Association between the number of employees of the company and the company's having a crisis management strategy/plan

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	9.886[a]	8	.273	.272		
Likelihood Ratio	10.814	8	.212	.279		
Fisher's Exact Test	9.860			.230		
Linear-by-Linear Association	.722[b]	1	.395	.414	.227	.052
N of Valid Cases	45					

a. 13 cells (86.7%) have expected count less than 5. The minimum expected count is .20.

b. The standardized statistic is -.850.

As can be seen from the table, the answer to the Fisher test was 0.230. Since the indicator is greater than 0.05, we can say that there is no correlation between the number of employees and the existence of a crisis plan.

If we test the dependence between the education level of the company's managers and the company's crisis management strategy/plan in the table below, with Pearson chi-square analysis, we get the following results.

Table 27 Dependence between the education level of the company's managers and the company's crisis management strategy/plan

Crosstab

	The company has a crisis management strategy / plan					Total
	1.00	2.00	3.00	4.00	5.00	

What is the education level of managers?	1.00	Count	2	1	1	1	0	5
		Expected Count	1.1	1.8	1.1	.9	.1	5.0
	2.00	Count	4	6	5	4	1	20
		Expected Count	4.4	7.1	4.4	3.6	.4	20.0
	3.00	Count	3	8	3	3	0	17
		Expected Count	3.8	6.0	3.8	3.0	.4	17.0
	4.00	Count	1	1	1	0	0	3
		Expected Count	.7	1.1	.7	.5	.1	3.0
Total		Count	10	16	10	8	1	45
		Expected Count	10.0	16.0	10.0	8.0	1.0	45.0

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.493[a]	12	.973
Likelihood Ratio	5.253	12	.949
Linear-by-Linear Association	.209	1	.647
N of Valid Cases	45		
a. 18 cells (90.0%) have expected count less than 5. The minimum expected count is .07.			

When this result is examined, it is seen that there is no relationship between the education level of the managers of the company and the company's having a crisis management strategy/plan, according to the Pearson chi-square statistics $\chi 2 = 4.493$, $sd = 12$, $p = 0.973$. However, as stated at the bottom of the analysis result table, the ratio of the number of cells with a theoretical value less than 5 was found to be 90.0%, and the Pearson chi-square test result is not reliable since this rate exceeds 20%. In this case the exact test should be used.

Table 28 Dependence between the education level of the company's managers and the company's crisis management strategy/plan

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	4.493[a]	12	.973	.986		
Likelihood Ratio	5.253	12	.949	.990		
Fisher's Exact Test	6.982			.986		
Linear-by-Linear Association	.209[b]	1	.647	.665	.358	.063
N of Valid Cases	45					
a. 18 cells (90.0%) have expected count less than 5. The minimum expected count is .07.						
b. The standardized statistic is -.458.						

Source: The author's results for calculation using SPSS software

As can be seen from the table, the answer to the Fisher test was 0.986. Since the indicator is greater than 0.05, we can say that there is no connection between the level of education of managers and the existence of a crisis plan.

In the table below, if we test the dependence between the company following a certain policy during the crisis and the company being affected by the crisis with Pearson chi-square analysis, we get the following results.

Tabla 29. Dependence between the company following a certain policy during the crisis and the company being affected by the crisis

Crosstab

			Your company is very affected by the crisis					Total
			1.00	2.00	3.00	4.00	5.00	
During the crisis, the company followed a set policy	1.00	Count	6	0	3	0	0	9
		Expected Count	2.4	2.6	2.8	.8	.4	9.0
	2.00	Count	2	8	4	2	2	18
		Expected Count	4.8	5.2	5.6	1.6	.8	18.0
	3.00	Count	3	5	5	1	0	14
		Expected Count	3.7	4.0	4.4	1.2	.6	14.0
	4.00	Count	1	0	1	1	0	3
		Expected Count	.8	.9	.9	.3	.1	3.0
	5.00	Count	0	0	1	0	0	1
		Expected Count	.3	.3	.3	.1	.0	1.0
Total		Count	12	13	14	4	2	45
		Expected Count	12.0	13.0	14.0	4.0	2.0	45.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	21.134[a]	16	.173
Likelihood Ratio	23.980	16	.090
Linear-by-Linear Association	1.663	1	.197
N of Valid Cases	45		

a. 23 cells (92.0%) have expected count less than 5. The minimum expected count is .04.

Source: The author's results for calculation using SPSS software

When this result is examined, it is seen that there is no relationship between the company following a certain policy during the crisis and the company being affected by the crisis, according to the Pearson chi-square statistics $\chi 2$=21.134, sd=16, p=0.173. However, as stated at the bottom of the analysis result table, the ratio of the number of cells with a theoretical value less than 5 was found to be 92.0%, and the Pearson chi-square test result is not reliable since this rate exceeds 20%. In this case the exact test should be used.

Table 30 Dependence between the company following a certain policy during the crisis and the company being affected by the crisis

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	21.134[a]	16	.173	.176		
Likelihood Ratio	23.980	16	.090	.070		
Fisher's Exact Test	21.463			.073		
Linear-by-Linear Association	1.663[b]	1	.197	.202	.114	.025
N of Valid Cases	45					

a. 23 cells (92.0%) have expected count less than 5. The minimum expected count is .04.

b. The standardized statistic is 1.290.

Source: The author's results for calculation using SPSS software

As can be seen from the table, the answer of Fisher's test is 0.073. Since the indicator is greater than 0.05, we can say that there is no connection between the company following a certain policy during the crisis and the company being affected by the crisis.

In the table below, if we test the dependence between the company having a crisis management strategy/plan and the company being affected by the crisis, with Pearson chi-square analysis, we get the following results.

Table 31 Dependence between the company having a crisis management strategy/plan and the company being affected by the crisis

Crosstab

			Your company is very affected by the crisis					Total
			1.00	2.00	3.00	4.00	5.00	
The company has a crisis management strategy / plan	1.00	Count	6	0	4	0	0	10
		Expected Count	2.7	2.9	3.1	.9	.4	10.0
	2.00	Count	2	8	4	2	0	16
		Expected Count	4.3	4.6	5.0	1.4	.7	16.0
	3.00	Count	2	2	5	0	1	10
		Expected Count	2.7	2.9	3.1	.9	.4	10.0
	4.00	Count	2	3	1	1	1	8
		Expected Count	2.1	2.3	2.5	.7	.4	8.0
	5.00	Count	0	0	0	1	0	1
		Expected Count	.3	.3	.3	.1	.0	1.0
Total		Count	12	13	14	4	2	45
		Expected Count	12.0	13.0	14.0	4.0	2.0	45.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	29.263[a]	16	.022
Likelihood Ratio	27.921	16	.032
Linear-by-Linear Association	3.554	1	.059
N of Valid Cases	45		

a. 25 cells (100.0%) have expected count less than 5. The minimum expected count is .04.

Source: The author's results for calculation using SPSS software

When this result is examined, it is seen that according to the Pearson chi-square statistics $\chi 2$ = 29.263, sd = 16, p = 0.022, there is a relationship between the company having a crisis management strategy/plan and the company being affected by the crisis. However, as stated at the bottom of the analysis result table, the ratio of the number of cells with a theoretical value less than 5 was found to be 100.0%, and the Pearson chi-square test result is not reliable since this rate exceeds 20%. In this case the exact test should be used.

Table 32 Dependence between the company having a crisis management strategy/plan and the company being affected by the crisis

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	29.263[a]	16	.022	.047		
Likelihood Ratio	27.921	16	.032	.027		
Fisher's Exact Test	24.295			.022		
Linear-by-Linear Association	3.554[b]	1	.059	.063	.035	.009
N of Valid Cases	45					

a. 25 cells (100.0%) have expected count less than 5. The minimum expected count is .04.

b. The standardized statistic is 1.885.

Source: The author's results for calculation using SPSS software

As can be seen from the table, the answer of Fisher's test is 0.022. Since the indicator is less than 0.05, we can say that there is a connection between the company having a crisis management strategy/plan and the company being affected by the crisis. However, it is necessary to increase the number of participants to make this connection more reliable.

Due to the uncertainty in the table below, if we test the dependency between the long-term rather than short-term plans and the fact that the company is affected by the crisis, with Pearson chi-square analysis, we get the following results.

Table 33. Dependency between the long-term rather than short-term plans and the fact that the company is affected by the crisis

Crosstab

			Your company is very affected by the crisis					Total
			1.00	2.00	3.00	4.00	5.00	
Due to the uncertainty, the plans are not short-term, but long-term	1.00	Count	4	1	2	0	0	7
		Expected Count	1.9	2.0	2.2	.6	.3	7.0
	2.00	Count	3	5	3	2	1	14
		Expected Count	3.7	4.0	4.4	1.2	.6	14.0
	3.00	Count	3	7	7	2	0	19
		Expected Count	5.1	5.5	5.9	1.7	.8	19.0
	4.00	Count	1	0	2	0	0	3
		Expected Count	.8	.9	.9	.3	.1	3.0
	5.00	Count	1	0	0	0	1	2
		Expected Count	.5	.6	.6	.2	.1	2.0
Total		Count	12	13	14	4	2	45
		Expected Count	12.0	13.0	14.0	4.0	2.0	45.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	21.405[a]	16	.163
Likelihood Ratio	18.663	16	.287
Linear-by-Linear Association	1.681	1	.195
N of Valid Cases	45		

a. 22 cells (88.0%) have expected count less than 5. The minimum expected count is .09.

Source: The author's results for calculation using SPSS software

When this result is examined, it is seen that according to the Pearson chi-square statistics $\chi 2$=21.405, sd=16, p=0.163, there is no relationship between the long-term plans rather than the short-term ones, and the company being affected by the crisis. However, as stated at the bottom of the analysis result table, the ratio of the number of cells with a theoretical value less than 5 was found to be 88.0%, and the Pearson chi-square test result is not reliable since this rate exceeds 20%. In this case the exact test should be used.

Table 34 Dependency between the long-term rather than short-term plans and the fact that the company is affected by the crisis

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	21.405[a]	16	.163	.167		
Likelihood Ratio	18.663	16	.287	.363		
Fisher's Exact Test	15.885			.391		
Linear-by-Linear Association	1.681[b]	1	.195	.221	.112	.024
N of Valid Cases	45					

a. 22 cells (88.0%) have expected count less than 5. The minimum expected count is .09.
b. The standardized statistic is 1.296.

Source: The author's results for calculation using SPSS software

As can be seen from the table, the answer of Fisher's test is 0.391. Since the indicator is greater than 0.05, we can say that there is no connection between the long-term plans rather than the short-term, and the company being affected by the crisis.

If we test the dependency between the company's crisis management strategy/plan in the table below and the policies followed by the company during the crisis with Pearson chi-square analysis, we get the following results.

Table 35 Dependency between the company's crisis management strategy/plan in the table below and the policies followed by the company during the crisis

Crosstabulation								
			What policies were followed by the company during the crisis?					Total
			1.00	2.00	3.00	4.00	5.00	
The company has a crisis management strategy / plan	1.00	Count	3	1	1	2	3	10
		Expected Count	2.0	1.6	3.6	1.8	1.1	10.0
	2.00	Count	2	4	7	2	1	16
		Expected Count	3.2	2.5	5.7	2.8	1.8	16.0
	3.00	Count	2	2	5	0	1	10
		Expected Count	2.0	1.6	3.6	1.8	1.1	10.0
	4.00	Count	2	0	2	4	0	8
		Expected Count	1.6	1.2	2.8	1.4	.9	8.0
	5.00	Count	0	0	1	0	0	1
		Expected Count	.2	.2	.4	.2	.1	1.0
Total		Count	9	7	16	8	5	45
		Expected Count	9.0	7.0	16.0	8.0	5.0	45.0

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.506[a]	16	.243
Likelihood Ratio	21.731	16	.152
Linear-by-Linear Association	.050	1	.824
N of Valid Cases	45		
a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .11.			

Source: The author's results for calculation using SPSS software

When this result is examined, it is seen that there is no relationship between the company's having a crisis management strategy/plan and the policies followed by the company during the crisis, according to the Pearson chi-square statistics $\chi 2$=19.506, sd=16, p=0.243. However, as stated at the bottom of the analysis result table, the rate of the number of cells with a theoretical value less than 5 was found to be 96.0%, and the Pearson chi-square test result is not reliable since this rate exceeds 20%. In this case the exact test should be used.

Table 36 Dependency between the company's crisis management strategy/plan in the table below and the policies followed by the company during the crisis

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	19.506[a]	16	.243	.243		
Likelihood Ratio	21.731	16	.152	.221		
Fisher's Exact Test	18.411			.216		

Linear-by-Linear Association	.050[b]	1	.824	.830	.434	.042
N of Valid Cases	45					
a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .11.						
b. The standardized statistic is -.223.						

Source: The author's results for calculation using SPSS software

As can be seen from the table, the answer of Fisher's test is 0.216. As the indicator is greater than 0.05, due to uncertainty, we can say that there is no connection between the company's having a crisis management strategy/plan and the policies followed by the company during the crisis.

In the table below, if we test the dependence between the root cause of the company facing the crisis and the negative impact of the crisis on the businesses with Pearson chi-square analysis, we get the following results.

Table 37 Dependence between the root cause of the company facing the crisis and the negative impact of the crisis on the businesses

Crosstab

			What was the most negative impact of the crisis on business activities?					Total
			1.00	2.00	3.00	4.00	5.00	
What is the root cause of the company facing crisis?	1.00	Count	2	0	5	0	1	8
		Expected Count	2.0	1.2	3.0	1.1	.7	8.0
	2.00	Count	1	2	1	2	1	7
		Expected Count	1.7	1.1	2.6	.9	.6	7.0
	3.00	Count	0	0	1	1	0	2
		Expected Count	.5	.3	.8	.3	.2	2.0
	4.00	Count	3	1	1	0	1	6
		Expected Count	1.5	.9	2.3	.8	.5	6.0
	5.00	Count	1	1	0	1	1	4
		Expected Count	1.0	.6	1.5	.5	.4	4.0
	6.00	Count	3	1	2	1	0	7
		Expected Count	1.7	1.1	2.6	.9	.6	7.0
	7.00	Count	1	0	3	0	0	4
		Expected Count	1.0	.6	1.5	.5	.4	4.0
	8.00	Count	0	2	4	1	0	7
		Expected Count	1.7	1.1	2.6	.9	.6	7.0
Total		Count	11	7	17	6	4	45
		Expected Count	11.0	7.0	17.0	6.0	4.0	45.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	25.704[a]	28	.589
Likelihood Ratio	33.051	28	.234
Linear-by-Linear Association	.285	1	.593
N of Valid Cases	45		
a. 40 cells (100.0%) have expected count less than 5. The minimum expected count is .18.			

Source: The author's results for calculation using SPSS software

When this result is examined, it is seen that according to Pearson's chi-square statistics $\chi 2$=25,704, sd=28, p=0.589, there is no relationship between the main reason why the company faced a crisis and the negative impact of the crisis on businesses. However, as stated at the bottom of the analysis result table, the ratio of the number of cells with a theoretical value less than 5 was found to be 100.0%, and the Pearson chi-square test result is not reliable since this rate exceeds *20%. In this case the exact test should be used.*

Table 38 Dependence between the root cause of the company facing the crisis and the negative impact of the crisis on the businesses

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	25.704[a]	28	.589	.[b]		
Likelihood Ratio	33.051	28	.234	.489		
Fisher's Exact Test	25.479			.418		
Linear-by-Linear Association	.285[c]	1	.593	.615	.307	.017
N of Valid Cases	45					
a. 40 cells (100.0%) have expected count less than 5. The minimum expected count is .18.						
b. Cannot be computed because there is insufficient memory.						
c. The standardized statistic is -.534.						

Source: The author's results for calculation using SPSS software

As can be seen from the table, the answer of Fisher's test is 0.418. Since the indicator is greater than 0.05, due to uncertainty, we can say that there is no connection between the main reason why the company faced the crisis and the negative impact of the crisis on businesses. But most importantly, it was noted at the bottom of the table that calculation was not possible due to insufficient information. We have stated in the previous sections that this is one of the limitations of our research.

In the table below, if we test the dependence between the factors affecting the crisis in Azerbaijan and the negative impact of the crisis on the businesses with Pearson chi-square analysis, we get the following results.

Table 39 Dependence between the factors affecting the crisis in Azerbaijan and the negative impact of the crisis on the businesses

Crosstab							
			What was the most negative impact of the crisis on business activities?				Total
			1.00	2.00	3.00	4.00	5.00	
What were the factors affecting the crisis experienced throughout the country (Azerbaijan)?	1.0	Count	7	5	6	1	2	21
		Expected Count	5.1	3.3	7.9	2.8	1.9	21.0
	2.0	Count	1	0	2	2	2	7
		Expected Count	1.7	1.1	2.6	.9	.6	7.0
	3.0	Count	1	1	3	0	0	5
		Expected Count	1.2	.8	1.9	.7	.4	5.0
	4.0	Count	0	0	2	1	0	3
		Expected Count	.7	.5	1.1	.4	.3	3.0
	5.0	Count	1	0	2	1	0	4
		Expected Count	1.0	.6	1.5	.5	.4	4.0
	6.0	Count	1	1	2	1	0	5
		Expected Count	1.2	.8	1.9	.7	.4	5.0
Total		Count	11	7	17	6	4	45
		Expected Count	11.0	7.0	17.0	6.0	4.0	45.0

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.212[a]	20	.703
Likelihood Ratio	19.537	20	.487
Linear-by-Linear Association	.393	1	.530
N of Valid Cases	45		
a. 28 cells (93.3%) have expected count less than 5. The minimum expected count is .27.			

Source: The author's results for calculation using SPSS software

When this result is examined, it is seen that there is no relationship between the factors affecting the crisis in Azerbaijan and the negative impact of the crisis on businesses, according to the Pearson chi-square statistics $\chi 2$=16.212, sd=20, p=0.703. However, as stated at the bottom of the analysis result table, the ratio of the number of cells with a theoretical value less than 5 was found to be 93.3%, and the Pearson chi-square test result is not reliable since this ratio exceeds 20%. In this case the exact test should be used.

Table 40 Dependence between the factors affecting the crisis in Azerbaijan and the negative impact of the crisis on the businesses

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	16.212[a]	20	.703	.759		
Likelihood Ratio	19.537	20	.487	.774		
Fisher's Exact Test	14.923			.772		
Linear-by-Linear Association	.393[b]	1	.530	.551	.278	.022
N of Valid Cases	45					
a. 28 cells (93.3%) have expected count less than 5. The minimum expected count is .27.						
b. The standardized statistic is .627.						

Source: The author's results for calculation using SPSS software

As can be seen from the table, the answer of Fisher's test is 0.772. Since the indicator is greater than 0.05, we can say that there is no connection between the factors affecting the crisis in Azerbaijan and the negative impact of the crisis on businesses.

In the table below, if we test the dependence between the education level of the managers and the main reason why the company is facing the crisis with Pearson chi-square analysis, we get the following results.

Table 41. Dependence between the education level of the managers and the main reason why the company is facing the crisis

Crosstabulation									
		Count							
		What is the root cause of the company facing crisis?							Total
		1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	
What is the education level of managers?	1.00	1	1	0	2	0	0	0	1	5
	2.00	4	3	2	2	1	5	2	1	20
	3.00	2	3	0	1	2	2	2	5	17
	4.00	1	0	0	1	1	0	0	0	3
Total		8	7	2	6	4	7	4	7	45

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18.812[a]	21	.597
Likelihood Ratio	20.944	21	.462
Linear-by-Linear Association	.574	1	.449
N of Valid Cases	45		
a. 32 cells (100.0%) have expected count less than 5. The minimum expected count is .13.			

Source: The author's results for calculation using SPSS software

When this result is examined, it is seen that according to Pearson's chi-square statistics $\chi 2$=18.812, sd=21, p=0.597, there is no relationship between the education level of the managers and the main reason why the company is facing a crisis. However, as stated at the bottom of the analysis result table, the ratio of the number of cells with a theoretical value less than 5 was found

to be 100.0%, and the Pearson chi-square test result is not reliable since this rate exceeds 20%. In this case the exact test should be used.

Table 42 Dependence between the education level of the managers and the main reason why the company is facing the crisis

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	18.812[a]	21	.597	.649		
Likelihood Ratio	20.944	21	.462	.657		
Fisher's Exact Test	17.682			.624		
Linear-by-Linear Association	.574[b]	1	.449	.469	.239	.023
N of Valid Cases	45					
a. 32 cells (100.0%) have expected count less than 5. The minimum expected count is .13.						
b. The standardized statistic is .757.						

Source: The author's results for calculation using SPSS software

As can be seen from the table, the answer of Fisher's test is 0.624. Since the indicator is greater than 0.05, we can say that there is no connection between the education level of the managers and the main reason why the company is facing the crisis.

If we test the dependence between the factors affecting the crisis experienced throughout the country (Azerbaijan) and the negative impact of the crisis on businesses in the table below, we get the following results.

Table 43 Dependence between the factors affecting the crisis experienced throughout the country (Azerbaijan) and the negative impact of the crisis on businesses

Crosstab							
			What was the most negative impact of the crisis on business activities?				Total
			1.00	2.00	3.00	4.00	5.00	
What policies were followed by the company during the crisis?	1.00	Count	2	2	2	1	2	9
		Expected Count	2.2	1.4	3.4	1.2	.8	9.0
	2.00	Count	3	1	3	0	0	7
		Expected Count	1.7	1.1	2.6	.9	.6	7.0
	3.00	Count	5	3	7	1	0	16
		Expected Count	3.9	2.5	6.0	2.1	1.4	16.0
	4.00	Count	1	0	3	2	2	8
		Expected Count	2.0	1.2	3.0	1.1	.7	8.0
	5.00	Count	0	1	2	2	0	5
		Expected Count	1.2	.8	1.9	.7	.4	5.0
Total		Count	11	7	17	6	4	45
		Expected Count	11.0	7.0	17.0	6.0	4.0	45.0

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.118[a]	16	.378
Likelihood Ratio	20.686	16	.191
Linear-by-Linear Association	1.485	1	.223
N of Valid Cases	45		
a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .44.			

Source: The author's results for calculation using SPSS software

When this result is examined, it is seen that there is no relationship between the factors affecting the crisis experienced throughout the country (Azerbaijan) and the negative impact of the crisis on businesses, according to the Pearson chi-square statistics $\chi 2$=17.118, sd=16, p=0.378. However, as stated at the bottom of the analysis result table, the rate of the number of cells with a theoretical value less than 5 was found to be 96.0%, and the Pearson chi-square test result is not reliable since this rate exceeds 20%. In this case the exact test should be used.

Table 44 dependence between the factors affecting the crisis experienced throughout the country (Azerbaijan) and the negative impact of the crisis on businesses

Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	17.118[a]	16	.378	.[b]		
Likelihood Ratio	20.686	16	.191	.381		
Fisher's Exact Test	15.051			.424		
Linear-by-Linear Association	1.485[c]	1	.223	.233	.123	.019
N of Valid Cases	45					
a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .44.						
b. Cannot be computed because there is insufficient memory.						
c. The standardized statistic is 1.219.						

Source: The author's results for calculation using SPSS software

As can be seen from the table, the answer of Fisher's test is 0.424. Since the indicator is greater than 0.05, we can say that there is no connection between the factors affecting the crisis experienced throughout the country (Azerbaijan) and the negative impact of the crisis on businesses. But most importantly, it was noted at the bottom of the table that calculation was not possible due to insufficient information. We have stated in the previous sections that this is one of the limitations of our research.

As we can see from the results of the study, the history of companies in Azerbaijan, the number of employees and the level of education of managers do not have a strong impact on the level of crisis planning of companies. In this case, we have to look at the relationship between other indicators. The general idea at the time of the survey was that there were differences in the level of planning in companies that emerged at different times, had different numbers of employees, or had different levels of management training. However, the results of the survey and mathematical analysis showed that most companies are planning. But the main problem is that none of this can prevent the impact of the crisis. That is, none of the general characteristics of companies, the form of the crisis, or the measures taken by companies during the crisis, help to reduce the effects of the crisis. Thus, there is no connection between the indicators.

4.2. Limitations of the study

Our research was limited to the answers given by the sample group of 45 people who participated in our survey. The limitation in the sample is the impossibility of examining the entire research population and low number of attendees for the survey with limited time. The assumption that participants gave correct and sincere answers is another limitation of our study. Tendency to not to expose internal problems of the company may create deficiencies in results. In addition, it was assumed that the selected sample group adequately represented the population and that generalization could be made over the sample to the population. In future studies on similar subjects, suggestions can be made to develop new scales to increase the sub-dimensions in the scales, to carry out research, to increase the number of companies to be examined, to work with a larger sample size by increasing the number of company employees included in the sample group.

4.3. Conclusion

Crisis preparation and crisis management plans, which are of such vital importance for organizations and have devastating effects, are neglected by organizations, and it is understood how important it is to be prepared only when a crisis occurs. Although the crisis management processes of organizations depend on the management style, organizational culture, intensity of communication, and most importantly, the causes of the crisis, the effects on all organizations, whether government, business or NGO, are similar and mostly destructive.

As a result of our research, the statements in the scales, literature review, and asking the managers in various sectors were created by evaluating the activities carried out before, during and after the crisis, which we needed to develop because we could not find it in the literature, and the effects of these activities on both the crisis management and the organization. The created expression pool was organized with the help of people who are both administrators and academicians. After the analyzes carried out with the data obtained by the questionnaire query, the questionnaire analysis was started by giving the final form to the statements. Of the collected questionnaires, only the questionnaires filled by 45 managers working in managerial positions were included in the analysis. First, Exploratory Factor Analysis studies were carried out with the data obtained from the survey study. Then, reliability analyzes were performed to determine the internal consistency of the factors obtained. In all statistical analyzes used within the scope of the research, the level of significance was accepted as 0.05 and all the results were tested in two ways.

The purpose of the study is to investigate and monitor the current state of crisis management systems in SMEs in Azerbaijan, as noted in Chapter 1. The following results were obtained in the analysis carried out to achieve the mentioned goal and the mentioned additional goals:

1) There is no connection between the company's crisis management plan and the company's year of establishment. The fact that the periods between the crisis years, which were taken into account when compiling the questionnaires, did not have an impact on planning confirms the idea that crisis planning in SMEs dates back to the first years of independence. That is, regardless of the year of establishment, most SMEs have a crisis management plan.

2) The analysis of the relationship between the dates of establishment of companies and the existence of a crisis plan examined the similarity between the number of employees and the level of education of managers and the development of crisis plans. That is, regardless of the level of education of the head of the company and the number of employees, most companies develop a crisis management plan.

3) The effectiveness of the crisis management plan in mitigating the effects of the crisis for the company was clarified through the Chi-Square test. But the main problem here is that the Pearson test is not reliable. However, the Fisher Exact test result was 0.22, confirming a link between the two. But another point is that the reliability of this result is low. This is because the small number of participants, which is the main reason why the initial analysis did not justify itself, was also mentioned here.

4) The Fisher test of the Chi-Square analysis showed that the policies implemented for crisis management were not related to the mitigation of the crisis ($p = 0.073$).

5) When examining the relationship between the cause of the crisis and its impact on the company, it was found that there is no connection between this pair ($p = 0.418$). In other words, regardless of the causes of the crisis, the effects of the crisis were felt in most of the companies surveyed.

6) There is also a lack of correlation between the policies pursued by companies and the impact of the crisis on the company ($p = 0.424$). In the same way, it shows that the policies of companies have nothing to do with the crisis and its impact on the company.

7) The same result occurred when examining the relationship between crisis factors at the national economy level and the company's crisis factors ($p = 0.772$). Here, too, it can be concluded that the creative factor of the crisis in the company is not the general economic system.

8) The same situation was encountered when examining the relationship between the level of education of managers due to the crisis we studied ($p = 0.624$).

After a general analysis of all this, the opinion that emerges is that SMEs in Azerbaijan are coming out of the crisis affected in any case. None of the analyzed factors which are level of education for managers, history and capacity of companies and crisis management plans/policies in place have direct impact on the crisis for the company experienced as per our research. Even though most of the companies have a crisis management plans established, they are seriously effected by the crisis. This fact is making us think about policies planned are not properly established and do not help companies to reduce or save from effect of crisis. This research can serve as a basis for future research to work on these factors and get better results.

The inability of technological innovations (17.4%) and changes in legislation and laws (15.2%) mentioned by the majority of respondents in the fourth question of the questionnaire to be related to the state's regulatory policy may also be the subject of crisis research. A detailed study of the role of the state in the crisis process can help SMEs take the necessary measures. A detailed study of the legal factors between the state and businesses that affect planning can accelerate the process of improving crisis planning.

Our research shows that most companies do not change their human resources policy (41.3% of companies). Also, evaluating of different market opportunities seems to be one of the main policies implemented during the crisis (34.8%). Searching for different market opportunities with the same employees can also prevent a crisis plan from working well. For this reason, a more detailed study of these factors in the future may increase the effectiveness of anti-crisis measures.

It is also important to examine the response of the survey to the management that emerged among the causes of the crisis in companies and the state. Thus, the incompetence of managers and management problems in companies across the country as the cause of the crisis in companies were answered by 13% of participants. This shows that there are certain problems in the company's management. Future research could look at how managers respond to different crises and how they plan for crisis.

Preferring interview-based research by selecting specific sectors may be the subject of research for future research. Because in face-to-face meetings it is possible to get more information about the measures taken by companies against the crisis and the flexibility of measures. Extensive information on the timing of the creation and updating of crisis management plans is also available.

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Appendices

Appendix 1: Survey Questions

When was the company founded? *

- ◯ 1991-2002
- ◯ 2003-2007
- ◯ 2008-2015
- ◯ 2016-2022

How many employees are working? *

- ◯ 1-10
- ◯ 11-50
- ◯ 51-250

What is the education level of managers? *

- ◯ High school graduate
- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ Doctoral degree
- ◯ Digər: _____

What is the root cause of the company facing crisis? *

- ◯ Technological inadequacies
- ◯ Changes in legislation and laws
- ◯ Insufficient export incentives
- ◯ Incompetence of managers
- ◯ The high amount of loans taken from banks
- ◯ Lack of resources
- ◯ Lack of proper business planning
- ◯ Inability of the business to adapt to its environment
- ◯ Digər: _____

What was the most negative impact of the crisis on business activities? *

- ◯ Decline in sales
- ◯ Increasing tension and conflict within the business
- ◯ Experiencing financial problems
- ◯ Weakening of company image
- ◯ Decreased quality in products/services
- ◯ Digər: _____

What were the factors affecting the crisis experienced throughout the country (Azerbaijan)? *

- ◯ General economic factors
- ◯ Technological factors
- ◯ Management problems of the company
- ◯ Legal issues
- ◯ Natural disasters
- ◯ Competition problems
- ◯ Digər: _____

What policies were followed by the company during the crisis? *

- ◯ Downsizing of operating capacity
- ◯ Change in the organizational structure of the company
- ◯ Evaluation of new market opportunities
- ◯ Applying sales promotion methods
- ◯ Benefiting from credit opportunities
- ◯ Digər: _____

What was the human resources policy during the crisis? *

- ◯ Dismissal of employees
- ◯ Retirement
- ◯ Reducing working times
- ◯ Paid leave
- ◯ No changes occurred
- ◯ Digər: _____

Please share your thoughts on the measures taken during the crisis. *

	I completely agree	Agree	I'm undecided	I do not agree	I do not agree at all
Your company is very affected by the crisis	◯	◯	◯	◯	◯
The company has done some work to manage the crisis	◯	◯	◯	◯	◯
During the crisis, the company followed a set policy	◯	◯	◯	◯	◯
The company has a crisis management strategy / plan	◯	◯	◯	◯	◯
Due to the uncertainty, the plans are not short-term, but long-term	◯	◯	◯	◯	◯
Plans were kept flexible during the crisis.	◯	◯	◯	◯	◯
After the crisis, the company's reputation and production capacity expanded.	◯	◯	◯	◯	◯
The crisis has led to an increase in the flow of information within the enterprise.	◯	◯	◯	◯	◯