

**Open University Cyprus**

**Hellenic *Open University***

***Master's join degree/post graduate Programme  
Enterprise Risk Management (ERM)***

## **MASTER THESIS**



**How do companies in the construction industry turn threats and crises into strategic opportunities in times of crisis management?  
Research and examples of Practice Implications of Case Studies from  
Cyprus.**

**Olivia Pittalis**

**Supervisor: Dr Anastasis Petrou**

**May 2020**

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## **ABSTRACT:**

This paper presents the results of a study designed to address how companies operating in the construction industry turn threats into strategic opportunities in times of crisis management. Data has been collected from ten different construction companies operating in Cyprus, whose examples will be used to discuss how such companies react to crises. The results suggest the inexistence of proper crisis management in construction companies, yet explain through real case scenarios, how the companies create opportunities while surviving a crisis. The implications of the results for understanding how threats and opportunities are created through crisis management are critically examined, and future research directions are indicated.

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# CHAPTER 1

## INTRODUCTION

The construction industry has been described as nonlinear, complex and yet a dynamic phenomenon (Bertelsen, 2003). This is attributed to the fact that an industry as such, consists of unique organizations, each specializing in different projects of diverse orientation. Companies within the sector have been faced with crisis events several times in their recent or past history. At each occurrence, the crisis is unique, the impact is big and the probability of reoccurrence is almost zero. The impact of a crisis could be so huge, that a company might not survive and be forced into bankruptcy. On the other hand, if a company knows how to handle a crisis situation, could not only survive, but even create new opportunities for expansion and economic growth when the crisis is over.

Construction firms that have the knowhow and expertise to successfully operate throughout a crisis will manage to overcome the challenge at a minimum loss and following a strategy with diligent assessments, will even expand their business. In other words, “firms that can escape from a crisis, with zero or minimum damage may strategically have competitive advantages over existing rivals” (Babu & Sudhakar, 2016, pp.371). Based on this statement from Babu and Sudhakar in their academic study for “Construction Project Management during Economic Crisis”, the foundations of the current study are set; Crisis events have the potential to be a catalyst for positive organizational change, provided that company executives perceive the opportunity entailed within a well-handled crisis (Brockner & James, 2008).

This study attempts to reveal how construction companies operating in Cyprus, use innovative crisis management approaches to identify threats and seek strategic opportunities. A few years following the financial crisis of 2013 experienced by the Cypriot economy, we have witnessed the Cypriot property industry booming again, mainly attracting foreign markets, with skyscrapers for housing or commercial use

“mushrooming” primarily in Limassol city. In 2017, property sales in the island saw a staggering 132% growth from 2013 when sales had dropped to under half of what they were in 2010 (Source: [www.news.cyprus-property-buyers.com](http://www.news.cyprus-property-buyers.com)). This rapid growth is still trending through companies that have survived the crisis, and moved further on to establish new strategic goals and targets. Part of this success was paid off to the foreign investment programs implemented by the government in an attempt to support companies of the industry expand their businesses through new projects for housing or corporate development. Meanwhile, questions arise around this topic, disputing whether it is just another “bubble” in the property market, as described by Christopher Pissarides (Source: <https://cyprus-mail.com>), that will soon burst and leave the constructed buildings hanging empty, deteriorating slowly and putting the Cyprus economy in doubt for once more.

Before however arrive into conclusions, more information is needed regarding the companies’ preparedness plan. Are companies heavily depended on such government programs or they follow their own business plan? What steps were taken on the way forward to handle similar situations like the crisis of 2013? Is there a business continuity plan in place? How are changes in their external environment being assessed? Answers are expected to be received through the undertaken research study, with the main research objectives being set up as follows:

- Observe and analyze how crisis management is used by construction companies in Cyprus, if at all.
- Assess how well prepared are companies of the Cypriot construction industry to face unexpected situations.
- Evaluate the nature and scope of threats faced by construction industry companies and how are these handled.
- Compare how companies within the construction sector and based in Cyprus behave with regards to being compliant with government regulations.
- Compare how companies within the construction sector in Cyprus behave, with regards to being autonomous, particularly in terms of creating new opportunities without the support of governmental projects.



Ten different construction companies were approached and observed as a representative sample, in an attempt to find answers to the above statements. The original aim was to approach at least a sample of fifteen to seventeen companies, however due to difficulties faced regarding the timing of data collection and the hesitation of some companies to share information, the final sample was ten. Questions like the ones that follow were asked in order to facilitate the research: is there a crisis management plan in place; Is there a business continuity plan in place that is being practiced and monitored regularly; What is the company's policy on how the project portfolio is being spread; How is the client portfolio being spread?

The thesis is structured into five chapters in total, including the introduction; literature review; methodology; data presentation and analysis; and conclusion. In the literature review section, empirical research that preceded the current study is discussed and gaps were identified that could be perhaps solved at the end of the current research. The research on existing literature was performed based on each of the research objectives already outlined. Models and processes for crisis management are discussed that apply specifically for the construction industry.

The methodology section consists of six subsections, where the methods of data collection, presentation and analysis will be the main topics of discussion. The methods followed for the data collection are explained, where in this case are qualitative methods, using interview procedures. Therefore, an analysis of how interview questions were constructed will follow, based on the research objectives. The type and size of the selected sample is described, explaining any difficulties and challenges faced during the process. Then follows an evaluation and justification of the methodological choices and at last, a subsection explaining the ethical issues incurred during the data collection process.

The section of data presentation and analysis presents all information gathered from the interviews, as transcribed from the researcher, including demographics describing the participants' characteristics. The results are presented and analyzed based on each research question stated in the introduction.

The last section of the dissertation, the discussion chapter, is what ties everything together. Research results are interpreted and discussed in order to arrive into conclusions whether gaps exist between literature and real practice. Evidences that challenge empirical research analyzed during literature review are discussed and suggestions are made for future research on the subject.

# CHAPTER 2

## LITERATURE REVIEW

“Crises” within the construction industry, are described by Blackhard (2006) to be unwelcome situations that may occur during the progress of a construction project. Crises could be triggered either by natural phenomena such as earthquakes, socio-political conditions leading to a financial crisis, technical and complexity concerns resulting to faulty work that should be redone, or even due to poor construction-site conditions not fulfilling health and safety protocols (Anthopoulos et al., 2012). Moreover, Loosemore (1999) describes crises to be unexpected, forceful and cryptic events, which require rapid response. Construction companies are vulnerable to crises due to their complex environment, mainly because the initial investment costs are high for construction projects, triggering a high risk for financial damages as well.

Construction companies that manage to survive crisis situations are usually the ones that take severe actions in order to return to the pre-crisis conditions with a minimum loss incurred. As Sahin et al. (2015) mention in their conclusions for Innovative Crisis Management in Construction article, in order to achieve pre-crisis conditions, companies should act wisely as soon as they identify the problem, following survival strategies such as reduction of outflows, management centralization by temporarily suspending authorization from lower-levels of management, reward of high-performance employees and terminating contracts for low-performance employees. Also, commercial relationships should be revised between suppliers and customers, in an attempt to switch to more innovative ideas and processes. These suggestions are actions that could be considered during a crisis outburst, yet how can a company be prepared in advance before the outburst?

Crises can be prevented or at least their impact can be moderated, through a systematic attempt to assess risks within the internal and external environment of an

organization and create an action plan to be activated in case of emergency. In other words, practice crisis management. Organizational crisis management effectiveness is evidenced when potential crises are averted or when key stakeholders believe that the success outcomes of short and long-range impacts of crises outweigh the failure outcomes (Pearson and Clair, 1998: 59-61).

In this research study, we are not simply looking on how organizations should work towards preventing a specific crisis event; we are looking through a more spherical context, in order to examine how companies that operate within the construction and real estate industry, manage unexpected, critical situations. Crisis management is a management model that is applied in extreme scenario cases, yet a practice through a company's daily operations to enhance its level of preparedness. An ideal crisis management model or a "disaster-management program", as referred to by Mitroff et al. (2006), should embrace four essential components: preparation for a broad range of crisis types; mechanisms for picking up the early warning signals that accompany all crises; a well-trained crisis management team and lastly, the inclusion of internal and external stakeholders in crisis plans, policies and procedures (Mitroff et al. 2006). Sahin et al. (2015) discuss and provide examples for financial assessment through the analysis of macro-economic data regarding foreign exchange, interest rates, unemployment, new legal and government regulations.

The crisis management model that should be applied in construction companies has some specific characteristics that differ from the traditional management approach. Construction companies need to evaluate crises and distinguish them by their types, take preventive measures, learn lessons on how to recover as soon as possible. In order to achieve that, managers and employees should have character qualities such as flexible, creative, objective, courageous, decisive, patient, mentally strong, sensitive, self-sacrificing, team members, and active, open to innovation and change, and ready against unknown. (Babu & Sudhakar, 2016).

### **How crisis management is used, if at all?**

History has proved that the construction sector lacks crisis preparedness. During most of the economic crises that the sector had experienced, we have seen the construction industry in various countries collapsing or facing difficulties. While the sector would

rise up again stronger, the companies were yet attested to be fragile through time. Examples include the U.S mortgage crisis in 2007 which continued to spread in Europe the following years like a domino effect, the Southeast Asian crisis in the late-1990 and the Lithuanian construction industry (Kaklauskas et al. 2011). The reason of such recurring situations in the construction industry is not solely attributed to the absence of a crisis framework, it is rather due to the complex systems surrounding the industry environment, refraining professionals from being able to put in practice such frameworks. In order to overcome this complication, one must be able to self-organize, learn and adapt to a dynamically changing environment (Zhong & Pheng Low, 2009).

Therefore, a crisis management model or a framework, combined with a healthy organizational structure, could prepare the company for a crisis survival. International literature is indeed rich in crisis management frameworks, nevertheless, the following approach was selected for discussion based on its simplicity, which seems to suit the complex environment of construction companies: Babu and Sadhakar (2016) in their article propose 5 different approaches for Crisis management that can be easily adopted and implemented by construction companies in their everyday practice.

- The Escaping Approach
- The Solving Approach
- The Proactive approach
- The Reactive approach
- The Interactive approach.

In the following table, the essence of each approach is laid, based on what is proposed by Babu and Sadhakar (2016).

<b>The Escaping Approach</b>	With this approach, companies will manage to prevent negative events by examining changes and complications within their internal and external environment, catching early signals that indicate negative conditions. Top Management keeps the personnel informed about the company values and policy at all times and shares the same philosophy with all staff. It is important that during crises, all the personnel of an organization are guided in the same direction, in order to avoid chaos.
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<p><b>The Solving Approach</b></p>	<p>The solving approach will be activated during a crisis. The current conditions at the time should be perceived and identified clearly in order to behave accordingly. Construction companies should take into consideration the following criteria that would help them survive the disaster.</p> <ul style="list-style-type: none"> <li>• Opportunities that arise during a crisis.</li> <li>• Customer satisfaction philosophy should remain the same and even be enhanced, to boost the customers' trust.</li> <li>• Long-term investments should be reconsidered and adjusted to the new state.</li> <li>• Strengths in the strategic competition should be given special attention.</li> <li>• Qualified labor should be preferred.</li> </ul> <p>Having the above in mind while at the same time conducting a SWOT analysis, companies will manage to turn the crisis into an opportunity.</p>
<p><b>The Proactive approach</b></p>	<p>This is where Crisis Management fits in. Top management should have access to adequate information on incidences that could affect the company's normal activities, determine the embedded risks, and establish a system where early warning signals will be identified and assessed risk wise. Based on the information gathered, a prevention plan should be formalized by the crisis management team. By following these procedures, construction companies will manage to adapt their production and marketing activities to crisis conditions and can be financially successful. This approach constitutes the Signal Detection phase and the Prevention/ Preparation phase as outlined by Pearson and Mitroff (1993) in their discussion for crisis preparation. If these activities are done properly and if successful, crises could be prevented from occurring in the first place.</p>

<p><b>The Reactive approach</b></p>	<p>During an unexpected crisis, top managers will use the reactive approach through aggressive decisions that usually have to do with shrinkage of the business by closing sub-branches, reducing salaries, or even dismiss some staff after evaluation. This is a risky approach however, especially for construction businesses that are not ready to face potential crises, because they may struggle in a large-scale crisis and lose their customer and personnel trust.</p>
<p><b>The Interactive approach.</b></p>	<p>This approach demands permanent communication and information flow with all stakeholders, before, during and after the crisis, stating clearly what strategy will be followed against the crisis. The company should be honest and clear opposite their stakeholders in order to receive their support in turn and survive the crisis. The interactive approach also points at the learning aspect of crisis management (Elsubbaugh et.al. 2004); learning from past experiences to be able to recognize and avoid where possible prospect crisis events.</p>

While interpreting and discussing the collected data in chapter five, these five approaches are compared to the practices described by the participants, in order to examine how literature is justified by real life examples.

**How well prepared are companies of the construction industry at times of crisis?**

It is equally important to diagnose how well a company is prepared against the risk of unexpected situations, as well as examine how a company prevents external factors from influencing its normal activities. Sfakianaki et al (2016) argue that very little literature exists on how to manage crisis situations within construction companies. Most literature focuses on real case studies to analyze how companies have dealt with it on the spot, in an attempt to learn through real case scenarios. As already mentioned, the environment of construction industry is quite complex and continuously evolving, meaning that there is a lot of work and research to be done in order to transfer theory to practice.

Implementing a business continuity plan is a process that will enhance a company's level of preparedness regardless of the complex environment. Business continuity planning is a collective management process that identifies potential threats and provides a framework for building organizational resilience and capability for an effective response that safeguards the interests of its key stakeholders, reputation brand and value-creating activities (Source: ISO22301:2012). Goh Moh Heng (2015) emphasizes that the company has to go through seven different phases before it completes the business continuity plan. The phases consist of project management; risk analysis; business impact analysis; business continuity strategy; plan development; testing and exercising; project management. A summary of the seven phases would be the PDCA cycle, or in other words the Plan-Do-Check-Act (Heng, 2015). Phase one which is the project management, entails designing the project, in terms of defining scopes and objectives, setting an action plan, establishing the budget, assign roles and responsibilities within the team of executors and monitor the project from start to end. Risk analysis is the part where possible risks will be assessed together with control options that should be eventually implemented and monitored. The business impact analysis phase is the process where executives should analyze information regarding actions that could influence the project's performance and normal schedule and measure to what extent the schedule and result of the project will be impacted. The business continuity strategy is where BC professionals will design and develop the BC strategy based on the information gathered and train the people involved by conducting test exercises. In the plan development phase, everything done so far must be designed and formalized in a BC plan template. The plan must be validated and signed by the head managers of the respective business units. In this way, the feasibility of the plan will be justified. Once everything is written down and officially approved, the BC plan must be tested and ensure that it works properly. Tests should be executed; malfunctions should be identified and corrected. The final phase of program management is needed to ensure that the plan is available and accessible to all teams involved in the project and that it meets international standards. It is important that the plan is maintained regularly and updated when deemed necessary.

The aim of the current research is to examine whether construction companies are still operating without a proper plan or whether they have constructed a business



continuity plan, based on what has been described above.

### **How do construction companies evaluate threats?**

Identifying and evaluating threats is part of crisis management and is considered to be a competitive advantage for the companies that manage to achieve it. Construction companies are faced with numerous threats that have to be assessed and enforce ways to help them deal with such threats.

A major threat undermining the construction industry is usually the likelihood of economic recession in the country of operation; a declining economy will shrink business activity, create unemployment and in general, slow down the market activity (Kiesha, 2018). Furthermore, the priority needs of consumers will change and demand for property purchase will be affected negatively. Threats can be usually identified and evaluated through SWOT analysis. SWOT analysis for a construction company is always useful and important. By brainstorming, management will get a list of strengths, weaknesses, opportunities and threats to contemplate. Sahin et al (2015) stress out three important points that a company should not ignore while brainstorming a SWOT analysis and these are its capital base, political, environmental and labor issues and keeping up with emerging technologies. SWOT analysis will also help them identify various opportunities that the crisis might bring in areas of their strengths. If the opportunities are identified early enough, the company will be able to take the market lead as soon as the economy recovers. Opportunities emanating from crises fall into two broad types; on one hand, opportunity may be realized if organizations can reduce the frequency, likelihood or impact of a negative major event and on the other hand, increase the likelihood and impact of positive events (Brockner & James, 2008). Companies that are well prepared and have their crisis team functioning correctly, they can implement a crisis management model, as long as the economic growth and environmental changes are fast paced. The new opportunities that can be considered include among other pillars, internal re-organization and high economic growth.

Work accidents at construction sites, is another major threat that all companies within the sector are faced with. In the European Union, construction has been established as a risky sector in terms of work accidents, with more than 1300 people being killed in construction accidents every year (Banaiteien & Banaitis, 2012). Such unfortunate facts are said to be the results of mismanaged risks, which normally require proper

planning and control during the design phase. Work accidents are inevitable within the sector. They can be reduced however or be treated in an effective way, when employees are trained to follow specific rules of health and safety at the construction site and be alert to act effectively in a state of emergency. Hallgren and Wilson (2008) conclude that in order to recover from a crisis, it is important among other practices to practice effective risk management at all stages of the project. Through effective risk management, the project manager will be able to recognize, identify and trace the root causes that trigger negative effects. Comprehensive and systematic risk management entails taking into consideration the following key components, that will help Risk Managers identify, analyze and respond to risks (Hallgren & Wilson, 2008):

- Risk identification
- Risk assessment
- Risk mitigation
- Risk monitoring and control.

Hence, Risk Managers will be in a position to identify events that might be undermining risks for the company, and assess the risk to simulate the impact to the company. Then they should structure procedures that will assist on mitigating the risk. Employees should be trained to work in line with the procedures and adapt to the new way of working. This however, should be monitored constantly through controls that will be set to ensure full compliance with the procedures.

During the last few years, threats affecting construction companies in Cyprus have increased due to the increasing construction rate of skyscrapers. This worries the fire department and local authorities, since they do not have the appropriate equipment to deal with work incidents in higher buildings. There are also arguments on whether companies, are actually following the European safety regulations. Such gap was revealed in October 2018, when a 52-year-old worker fell from scaffolding support 1.5 meters to the floor below, which was the 17<sup>th</sup> floor. The fire department's intervention at such high level was impossible, and the injured worker was rescued using the crane of a private building company. The fire department's spokesman insisted that there are specific standards that should be met in construction-sites such as the provision for a lift to help transfer tools, materials and workers from one floor to another. If the construction company in question had installed the lift into their site, then the task of the fire department would have been straight forward (Ioannidou, 2018). The fire

service stressed out that licenses should be provided only in cases where the relevant conditions have been met by the company before and during the construction of the building. Since however the construction of skyscrapers is generally a new feature for Cyprus, questions had been raised whether authorities could approve permits, and control that all necessary terms had been laid out by the developers to meet all required conditions. During the first three months of 2018, the government issued permits for 25 high-rise buildings alone. The fear that decisions have been taken too quickly without any long-term planning poses questions of reliability of validations before the permit approvals (Kades, 2018).

Last but not least, the huge delay in granting the building permits to the developers could be a threat that could impact the business performance if not evaluated and considered at the beginning of a project. Due to considerable bureaucracy in the public services, building permits are a huge concern for construction companies in Cyprus. They can wait up to a year until they are granted the license to start building the properties. This delay incurs risks, such as problems with financing negotiations and deterioration of tools/ materials for the construction. Despite the fact that permit documents are already in the pipeline, cash-flows for the company are also on hold because they cannot promote their properties before they are ready to start construction works (Kontozis, 2019). Companies have to count this factor and calculate this cost of delay in their stress tests before finalizing the project budget.

### **How do companies within the Cypriot construction sector compare when it comes to compliance towards government regulations?**

Complying with laws and regulations imposed by legislative bodies, is one of the main obligations of construction companies towards the local authorities and their clients as well. Such regulations can originate from different levels of government; federal, state or local. As already mentioned, it is essential for companies to comply with EU regulations. In case of non-compliance, where health and safety issues are jeopardized, buildings will be assessed as unsafe for occupancy. During July 2018, new amendments were voted by the Cypriot members of the parliament, in an effort to harmonize the Cypriot law with the 2014 updated European Union directive that aims to protect the environment and public health by assessing the environmental impact of public and private projects. This new amendment enquires comprehensive environmental studies

within the project area as a prerequisite for the building permit. Representatives and executives of the property developers for luxury high rise buildings were asking the state to revise the legislation, since this would cause extra delays, and extra costs, especially for smaller size projects (Source: [www.news.cyprus-property-buyers.com](http://www.news.cyprus-property-buyers.com)). Nevertheless, the amended laws and regulations from the European Union have to be followed regarding all aspects such as environmentally friendly buildings, health and safety standards in construction sites. Companies will have to include part of their budget for the changes and adaptations to the new regulations. There are cases where company representatives are not functioning for the benefit of public health; instead they focus on what would be more profitable and beneficial for the owners. This however will turn against the company, since public, whether being customers or non-customers, still belong to the stakeholders of the company and are affected by its actions.

During the information gathering for this research study, attention was be paid on how each participating company behaves towards the public and how diligent are in terms of following the regulations as set.

### **How Cypriot construction companies compare when it comes to being autonomous; i.e.: developing new opportunities and generating profit without the support of governmental projects?**

After almost a decade of frozen projects and property developments hanging incomplete, the construction sector in Cyprus is currently considered to be a fast-moving sector. It has actually expanded unexpectedly fast, with the aid of government programs and incentives. More precisely, the government's scheme "Cash for Passport" (Loizou, 2017), has boost up the economy, through property investments. The scheme entails citizenship and residency for foreigners in Cyprus by investing through property purchase. In more detail, an investment of €2.0 million in real estate is required, plus a donation of €75,000 to the Government's research and Development fund (Source: [www.goldenvisas.com](http://www.goldenvisas.com)), in order to receive Cypriot citizenship. The described scheme has created a handful of opportunities for the construction industry; companies took the opportunity to work on new projects and investments appealing to

foreigners, by promoting the scheme through their websites and advertising it through the web in an attempt to reach the desired investors and increase their cash flows.

Nevertheless, this opportunity can easily be turned to a threat; On one hand the financial sector being overwhelmed into new financing and on the other hand, the property sector eager to rise again, has led the European Commission to start questioning the level of checks performed by local authorities regarding the transparency of documents provided by the candidates applying for the residency scheme. During spring of 2018, Cyprus was included in the “black list” of 21 countries prepared by the OECD (Organization for Economic Co-operation and Development), who’s residency and/ or citizenship by investment schemes potentially pose a high-risk to international efforts to combat tax evasion (source: Howarth, 2018: [new.cyprus-property-buyers.com](http://new.cyprus-property-buyers.com)). Transparency International made the point through an online article in October 2018, that the citizenship and residency by investment programs, commonly known as “golden visas”, offered by some EU Member states, like Malta, Cyprus and Greece, are huge business, with enormous amounts of money involved. Checks for money laundering and corruption should be particularly thorough, and in fact, scandals are not a rare situation in these schemes. Examples of such scandals include the two Ukrainian businessmen who were granted the Cypriot citizenship, before allegations emerged that they had extracted 4.8 billion Euros from a bank they found together in Ukraine. Another example includes the three Russian investors appearing on the US “Kremlin List” who were awarded with Maltese passports. Authorities are obliged to impose more vigorous checks on due diligences, before proceeding to a transaction for citizenship through the scheme (source: Howarth, 2018: [new.cyprus-property-buyers.com](http://new.cyprus-property-buyers.com)).

What we are currently witnessing, is the construction sector being favored by the government, using the residency schemes to attract foreign investors. According to [Cyprus-property-buyers.com](http://Cyprus-property-buyers.com), nearly half of the property contracts deposited at the Land Registry Office during the first half of 2018 were for properties purchased by non-Cypriots. If the government is forced to restrict the number of property-for-passport investors to 700 passports per year, this number will decrease. If the construction industry heavily depends on the investment for passports scheme to attract investors from overseas, then we are running the risk of another bubble in the sector which will last probably for another few years before it bursts. Limassol, one of the cities in Cyprus

which is experiencing most of the property development share, fears the fact that these luxury developments will never be occupied permanently and that in a few years they will be falling into disrepair, waiting to be sold back in the market and projecting an image of a “ghost town” for Limassol (Editorial posted in [cyprus-property-buyers.com](http://cyprus-property-buyers.com)).

Companies should spread their portfolio wisely, by relying less on the government programs and focus more on their own abilities to enter various markets, like the local house purchasing, student housing, holiday homes. This study aims to observe how various companies in Cyprus behave on this matter; whether they create their own opportunities, they follow market trends, or they still depend on government incentives to make profits.

# CHAPTER 3

## METHODOLOGY APPROACH

The research methods of this study were based on the qualitative research approach. Qualitative research, as described in the Oxford Handbook of Qualitative Research, edited by Patricia Leavy (2014) is an expansive and constantly evolving methodological field that encompasses a wide range of approaches to research, as well as multiple perspectives on the nature of research itself. Considering the research objectives set in the introduction, qualitative methods would best qualify for the data collection, since a more comprehensive data would be gathered through interaction with the selected sample. Yes/No answers or simple figures would not be enough to capture the true picture behind the answers to those questions. It is rather important to hear to insight stories that would help better understand the means behind the companies' actions. Semi-structured interviews were designed based on the information gathered during the literature review and the research questions outlined in the introduction.

### **3.1 Qualitative Methods:**

Qualitative research seeks to answer questions and study phenomena and processes in their natural settings and intend to make sense of how people interpret them (Hallberg, 2006). In this research study, phenomenology methods have been used as the main qualitative data collection. Phenomenological methods aim to develop a clear and accurate understanding of a human experience by describing an eventful situation (Moustakas, 1994). This is a particularly strong approach, since it provides a complete description of human experiences. However, the results depend on participants' own understanding and transmission skills of information (Dudovskiy, 2018). This was resolved by the interviewer, since help was provided to the interviewees in order to simplify the information transmission process, and receive truthful information from the participants.

## **3.2 Data Collection Methods:**

The most widely accepted way to gather qualitative data is through the conduction of interviews. Interviews can be considered to be time-consuming and recourse intensive, yet, they are particularly useful for getting the story behind a participant's experiences. The interviewer can pursue in-depth information around the topic. Interviews can also be used as a follow-up procedure in case questionnaires are used, to further investigate participants' responses (McNamara, 1999). During the data collection process of this study, three different types of interviews were combined, in an attempt to guarantee the quality and precision of results; the standardized and open-ended approach methods were used, where similar open-ended questions were asked to all interviewees. In this way faster interviews were facilitated, which was widely appreciated by the interviewees, since they did not find the interview process time consuming at any point during the course of our cooperation and they were even eager to engage in further discussions. Also, this enabled comparable results, which could be easily analysed and commented upon in chapters four and five. At the same time, one or two closed-fixed questions were included, of which answers had to be chosen from a list of alternative options. Finally, the general interview guide approach was also engaged in the process, where despite the uniformity of questions, a degree of freedom and flexibility was allowed, in terms of getting comprehensive information from the interviewee.

The chosen sample that participated in the research includes 10 Cyprus-based companies that are involved in the development and construction or real estate business. Originally, the intention was to have a sample of companies whose operations involve residential buildings, commercial buildings, industrial construction and heavy infrastructure construction. Also, companies involved in projects of new construction, renovation and demolition for both residential and non-residential projects as well as public works, such as streets, roads, highways. Despite the initial intention to interview more than one professional from each company, this was not possible, since companies could only spare time for one interview and it would either be the project manager or the general manager, where in quite a few cases the General Manager was also one of the company owners. It was also evidenced during the interview process, that crisis management department did not exist in the interviewed companies; Any work that has to be done under the umbrella of the relevant field is taken care by the project manager or project engineers. Even though a list of the



selected companies was originally drafted, the final list was very different from the original one, since a lot of the companies contained in the original list, refused to give information even when assured confidentiality and anonymity from the researcher's side. Nevertheless, other companies within the sector were searched for and contacted, that still qualified for the characteristics mentioned above, to complete the sample size. After requests of the majority of participants to keep their company name confidential, the final list of the participating companies was not included in the report; company name was replaced by the company identification number, for discussion reference in chapters four and five.

### **3.3 Constructing the interview questions:**

Interview questions (a copy of which is provided in appendix I), had to be structured in such a way, that would yield the right answers to the questions outlined in the introduction. Hence, the interview questions were derived based on answers needed for the questions below;

- **How crisis management is used, if at all?**

In order to be able to manage crises, companies should be able to identify, assess and minimize risks. At first, participants were asked to describe their crisis management plan if one existed. Moreover, participants were asked to describe how their company assesses risks and possible threats undermining, demonstrating the means or policies they follow to minimize them. Examples were provided by the interviewer for this question in order to guide the interviewees into answering to the point.

- **How well prepared are companies of the construction industry at times of crisis?**

The level of preparedness for companies could be enhanced based on the existence of a business continuity plan. In order to capture this question, participants were asked whether their company has a business continuity plan in place, and if yes, whether it is practiced and tested regularly. If the answer to the business continuity question was negative, a follow-up question proceeded, to ask whether the company plans to proceed with such a plan in the future.

- **How do construction companies evaluate threats and opportunities?**

Based on what was discussed in the literature review, the way a company will handle and overcome a crisis, reveals how threats are evaluated and opportunities are grabbed by the company in times of crisis management. Through a set of predetermined options, participants were asked to reveal what would be the first thing to do as a company, at the time of a crisis. Participants were then asked to describe based on their understanding and guidance provided by the interviewer, a recent crisis event that their company had experienced. Follow-up questions were asked on how the crisis was handled by the company, whether it was an opportunity for further growth, or whether they had to suspend their operations until the crisis was over.

- **How do companies within the Cypriot construction sector compare when it comes to compliance towards government regulations?**

Based on the readings regarding the safety of the high-rise buildings, it is important to know whether companies follow procedures and regulations for the safety of workers at the construction site, but also for the safety of the prospect tenants who will eventually occupy the building. Participating companies were asked whether they strictly follow government and European regulations, in an attempt to compare how each company reacts to law compliance. Special emphasis was given to those companies involved in the construction of high-rise buildings, due to the fact that extra control is pursued from the EU side, as well as due to the higher risk involved.

- **How Cypriot construction companies compare regarding being autonomous, particularly in terms of developing new opportunities and generating profit without the support of governmental projects?**

For the purposes of the above question, participants were asked to share their company's strategy regarding market trends, spread of client portfolio, the flexibility they allow in their projects and their dependence on the government incentives, paying attention to the well-known "Cyprus Investment Program". As already highlighted during the literature review section, many companies were and still are involved in this program which yielded a fair portion of the profits to the Cypriot economy. Based on the

information received, conclusions were derived, regarding the types of businesses that religiously follow market trends to the ones that prefer to create their own unique market path. Moreover, based on their answers, conclusions were derived regarding the broadness of the companies' portfolio and their flexibility in moving from one type of market to another in case of emergency.

### **3.4 Analyzing qualitative interview data:**

The data collected through the interview process, was analysed using the three-stage analysis method as described by Miles and Huberman (1984), structured into reduction data, display data and conclusion drawing.

**Data Reduction:** According to Miles and Huberman (1984), data reduction refers to the process of selecting, simplifying and transforming information into coded data, whilst the researcher decrypts meanings and insights from the participants' stories. Each of the participants' answers were transcribed exactly as received by the interviewee. After the transcribed data was carefully read to study the trends and repetitions of stories, the researcher proceeded to encode the answers of the interviewees, by entering the data in an excel data file. A matrix was created, using number identification codes for each company vertically. The questions were registered horizontally each representing a separate field of information. Under each question and for each identification number, data collected was entered representing what each company had replied for each question.

**Data Display:** When transcribed data was well grasped, in the data analysis section, the qualitative data were presented in the form of narrative text. After all stories were gathered together, each story was analysed, looking for insights and meanings. Company interviews were compared and contrasted with one another, looking for interpretations. Narrative text was supported with graphical representations and tables where possible, to help arrive to conclusions in the last section (chapter five).

**Conclusion drawing:** Based on what was exhibited in the data analysis section, comments and conclusions were derived based on the analysis done and the "confirmability" of the data that was tested. In order to test some of the data, a follow-up discussion was conducted with a few of the participants that had the time to discuss the findings and conclusions with the researcher.

### **3.5 Evaluation and justification of the methodological choices**

The use of qualitative methodology and phenomenology was decided upon the fact that construction is a very diverse industry, with impromptu crisis incidents that have to be dealt with instantly, irrespective of the timing and impact size. Usually, hearing the story behind the scenes gives a better perspective of the company's strategy. By receiving direct insight information, the data becomes more effective than just collecting quantitative data. Figures are not always self-explicable. As per Sumerson (2014), proceeding with a qualitative approach in gathering information, establishes a concrete meaning and process through new information, via participants' words, ideas, and empirical stories. Through the observations of participant's original words and behaviours, new trends will be identified in order to build theories.

Even though qualitative methods seem to be simpler and more adaptive to each type of study, they can still entail a few complications. For example, when conducting interviews, potential data are expected to be rich and inclusive; There will be however interviewees that might not be willing to share valuable insights to the interviewer. Moreover, there will be cases where they might require skillful facilitation to keep the interviewee on track and on the right direction. In order to avoid misunderstandings and miscommunications, a few core definitions relevant to the topic discussion, were given to the interviewee before the interview process begun, in addition to some briefing regarding the dissertation topic and the focus of the research. Extra effort was imputed from the interviewer's side, in order to empathize with the participants' story, make them feel trust and comfort in giving sensitive information about their company.

One of the most important advices when conducting interviews is to respect the time of the interviewee. This point was given extra care and was emphasized every time a participant was conducted, from the appointment arrangement, to the actual interview process and even after the interview, in the "thank you" letter. Based on this, a few of the participants conducted would admit that there was no time to spare in a face to face interview. In order not to waste any potential information that would be deemed useful, some interviews were performed through telephone. In such cases, the questions were sent beforehand to the interviewee, so that they would be aware of the nature of the

questions and accelerate the process through the phone. Again, this helped the interviewee feel more comfortable with the subject and positive to engage in further discussions related to the topic. With regards to the face to face interviews, more time had to be spared from the interviewer's side, in order to be informed about the company's profile and main route of operations, as well as be fully confident with the researched topic, in order to be in position to answer skillful questions from the interviewee.

When it comes to the analysis of the qualitative data collected, Appleton (1995) questioned the validity and reliability of such data, since what is analyzed is based on the researcher's interpretation. In order to overcome such threat, Appleton demonstrates in her article the characteristics of four concepts that can make the analysis of qualitative data reliable. These four concepts were implemented to a great extent in this study demonstrating a valid data analysis, that would yield the relevant conclusions;

1. **Truth Value:** After the process of interview meetings was completed and data was transcribed in the report, two of the participants were conducted again to communicate them the outcome of the findings, keeping the company names confidential and see whether the research outcome matched the real situation.
2. **Applicability:** Applicability refers to being able to generalize the findings based on the sample received in other areas of the study. For example, being able to generalize the practices of construction companies concentrated in residential buildings to construction companies concentrating in commercial buildings. On the other hand, to also recognize the cases where this is not applicable.
3. **Consistency** in the way data was collected and transcribed, defines to a great extent the reliability of the research. This was achieved to a great extent, since the same questions were asked to all participants, regardless if it was performed through telephone or face to face. Participants were all treated in the same manner and the same implies for the data collected, despite the size of the company.
4. **Neutrality:** Neutrality in qualitative data is achieved through auditability. In other words, by leaving clear trail of the decision path through the data analysis. Auditability has been achieved in this study, since all stages of data collection, transcription and analysis were clearly described.

On the basis of the above, it is believed that all negative issues were taken into consideration while proceeding with the methods described and all necessary actions were taken in order to keep the validity of this research at a sensible level, so that the data collected and analyzed would make sense to the reader.

### **3.6 Ethical issues involved in the research**

When conducting research, of human nature, it is always important to guarantee the participant's protection, in terms of confidentiality, anonymity and data security (Lenz et al. 2017). During the data collection process, all participants had received via e-mail, a letter of consent signed by the researcher-interviewer, whereby the interview process was explained, the participants' rights were communicated as well as the data transcription process. This was part of the procedure to make the participant feel comfortable about the subject and the type of information that would be revealed. Hence no implications of confidentiality would exist. The issue of anonymity was also handled, since no company names were mentioned in the report and last but not least, data security was paid extra attention during the transcription process and before the hard copies were destroyed, in order to avoid data loss. After every interview, all written information was transferred electronically and the hard copy was destroyed.

No further measures deemed necessary, since no minors were included in the sample, and no personal sensitive data was gathered from the participants. Therefore, the steps taken to manage the ethical issues involved were the ones necessary to keep the research study ethical, valid and reliable.

# CHAPTER 4

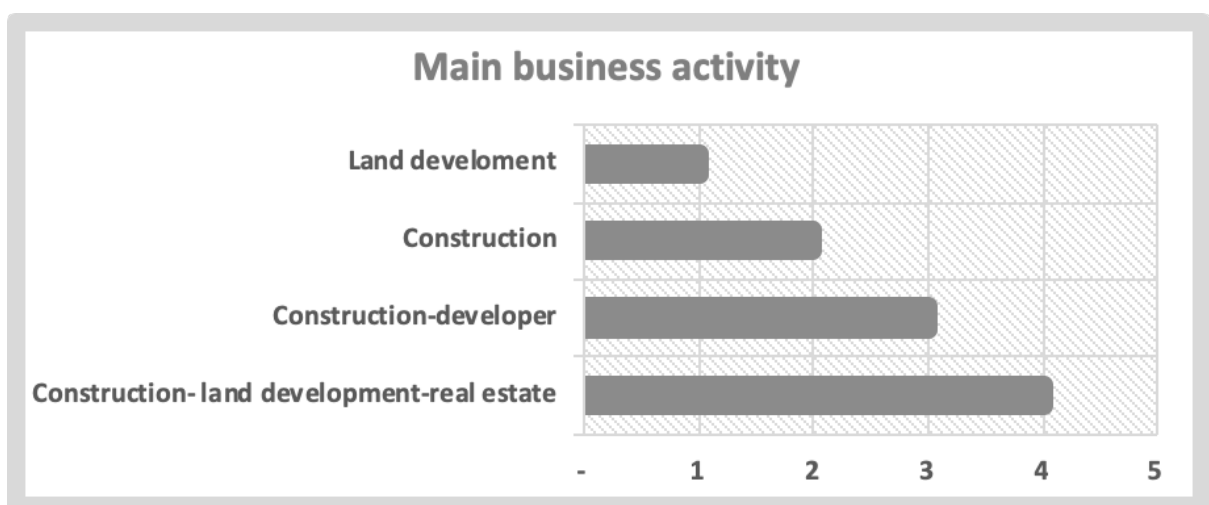
## DATA ANALYSIS

In this chapter, all data collected during the interviews is gathered together and analyzed, in order to produce substance for discussion in the last chapter of the thesis. For the purposes of this chapter, when referred to “companies”, the sample of ten companies that participated in this research will be assumed. The section begins with an analysis of the demographics and the companies’ characteristics and then for each research question stated in the introduction, the results are gathered and analysed.

### 4.1: Demographics and participant characteristics

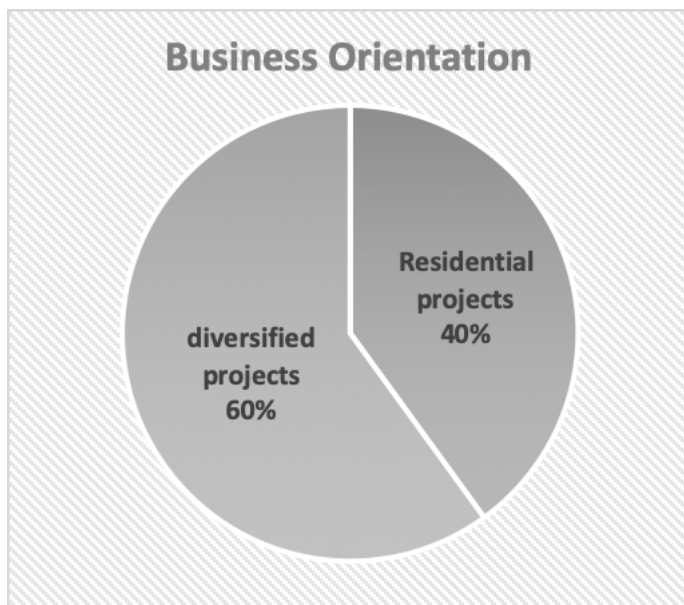
The final sample selected included 10 companies actively operating in the sector of construction, either through construction projects, land development, or real estate management. Figure 1 below, shows how the companies that participated in this research allocate their activity:

**Figure 1:**



The above figure demonstrates that seven out of ten companies interviewed, choose to expand their activities into more than one area instead of concentrating solely on one feature of the industry. Four companies are involved in construction, land-development and real estate management simultaneously. Another three companies are also involved in construction and land-development together. Only three out of the ten companies interviewed are concentrating their activities solely in one area, one in land-development, and two purely in construction. The company that is dealing solely with land-development is investing mainly in land to be developed into multi-story residential buildings. The other two companies exclusively operating in the area of construction, they focus on various projects, such as residential and commercial buildings or city infrastructure. They do not limit their projects in only one type of construction. Another noteworthy distinction is that the selected sample of companies participating in the research is involved in various activities, and deal with various aspects of the market in one way or another. This makes the research results more comprehensive, since the information received, originates from various types of businesses in the industry. The business orientation of the selected sample is depicted in the chart below;

**Figure 2:**



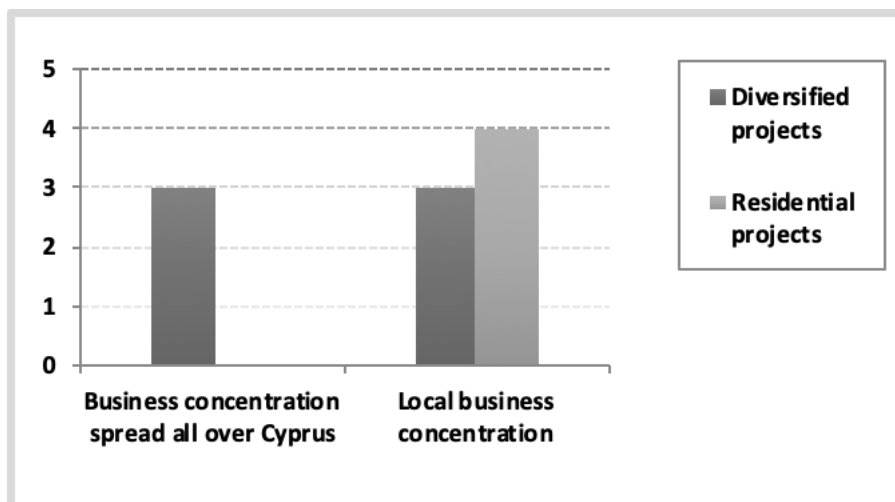
The majority of the companies interviewed, claimed that they usually undertake diversified projects. For example, they prefer not to focus only on commercial or residential projects, in order to spread and minimize their portfolio risk. The term diversified projects in construction industry, usually entails projects like the construction of building for residential use or for

commercial use, such as offices or shops. Moreover, companies undertaking diversified projects, also deal with long-term contracts for the maintenance of highly used buildings including shopping malls, universities, libraries and airports. They are also open to projects involving infrastructure, such as road maintenance or construction of big



highways. The companies that deal exclusively with the construction of residential buildings include family businesses which had actually confessed during the interview, that they prefer to stick to what they know best. Therefore, they keep specializing on one type of construction domain and yet they try to diversify their type of client portfolio. In the next figure, it is noticeable that the companies involved exclusively with residential projects, limit their business locally within their base city in Cyprus. They meet the market needs of their local area, since at the same time, companies of the same size and orientation serve the same market segment in another city. For this reason, they limit their construction and land-development activities, within their base city. The companies involved in diversified projects, expand their business all over the Southern part of Cyprus. It can be observed from figure three, that three of the six companies undertaking diversified projects, are involved in projects all of the Southern part of Cyprus. Another three companies of the same orientation keep their projects locally. The reasons for that vary; two of the companies are involved in the building of big projects within the city of Larnaca; new hotels, shopping malls and marina, in the attempt to contribute to the commercial growth of the city.

**Figure 3:**

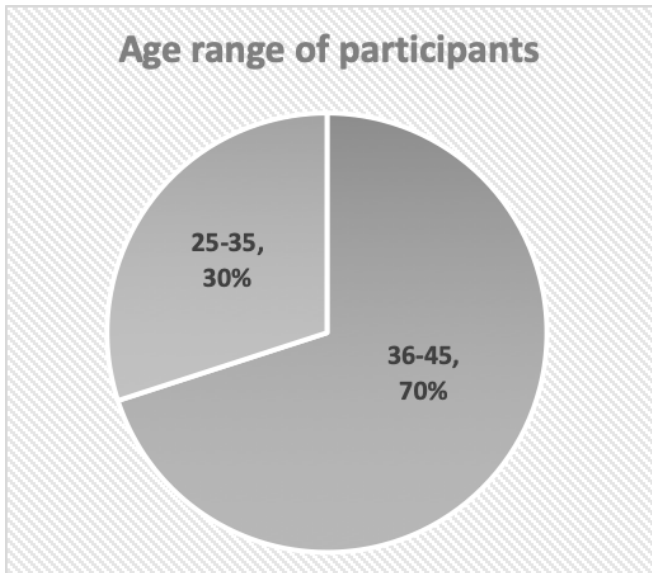


The third company remaining local, is the company dealing exclusively with land-development in Limassol city. Even though the company claims to have

diversified projects, the interviewee clarified that the company is mainly interested in the building of skyscrapers in the new growth era of Limassol, either for residential or commercial purposes.

The companies were selected and approached by the researcher, however the representative person was appointed by the company. All of the participants were professionals, holding managerial positions in their company. Hence, they could provide reliable information in a responsible way, on how their company operates. This

validates the argument that the information received is reliable and valid. Stimulatingly enough, all the interviewees were of male sex and their age range is summarized below in figure 4.

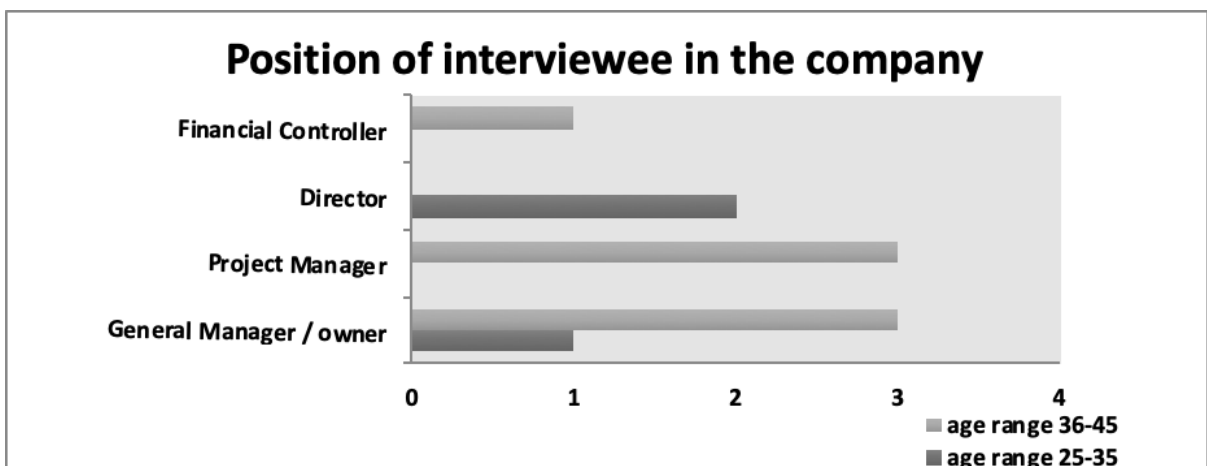


**Figure 4:**

Figure 4 demonstrates that the majority of participants interviewed were within the age range 36-45, that is the 70% of the sample interviewed and another 30% were within the age range of 25-35. The next graph captures the age range in relation to the job position of interviewees. It should be clarified however, that the participants under the age range 25-35

were in their early 30s. The reason being clarified is because it would be contradictory to have an educated manager less than 30 years with sufficient experience to lead a company. In the cases where the General Manager was one of the owners of the company, two of them in the range 36-45 were the founders of the company, where in the other two cases, the interviewees were offspring of the founder, inheriting and carrying on the family business.

**Figure 5:**



Below is a matrix showing the demographics of each company and participant together, for the purposes of the data analysis, the company identification number will be used during comparison.

**Figure 6: Sample companies - characteristics table.**

Company Identification	Projects undertaken	Age range	Gender	Position in the company	Business Operations	Operating location
#1	diversified projects	36-45	Male	Project Manager	Construction-developer-real estate	All over S. Cyprus
#2	diversified projects	25-35	Male	Director	Construction	Locally - base City
#3	diversified projects	36-45	Male	Project Manager	Developer	Locally - base City
#4	Residential projects	25-35	Male	General Manager / owner	Construction-developer-real estate	Locally - base City
#5	diversified projects	36-45	Male	Project Manager	Construction-developer-real estate	All over S. Cyprus
#6	Residential projects	36-45	Male	General Manager / owner	Construction-developer-real estate	Locally - base City
#7	Residential projects	36-45	Male	General Manager / owner	Construction-developer	Locally - base City
#8	Residential projects	36-45	Male	General Manager / owner	Construction-developer	Locally - base City
#9	diversified projects	36-45	Male	Financial Controller	Construction-developer	All over S. Cyprus
#10	diversified projects	25-35	Male	Director	Construction	Locally - base City

## 4.2: Research Questions

The interview question and number are referred for every research question. Interview questions are collectively found under Appendix 1.

- **How crisis management is used, if at all?**

Interview question numbers 1 and 9 captured the answers to the above research question. The sample findings are analysed below.

**Interview question 1:** *Does a crisis management plan (or Business Continuity Plan) exist in the company?*  
**a.** NO \_\_\_  
**b.** YES \_\_\_  
**c.** *If yes, below please provide a short description of the plan including areas of business and issues the plan covers.*

Six out of 10 participating companies could not give a straight yes or no answer for this question. They rather claimed that nothing is officially documented on how the company will act in a state of emergency; nevertheless, all companies under this category follow a risk mitigating policy on all projects they undertake. They organize seminars and trainings for their staff, in an attempt to be prepared to face any kind of unfortunate event. Company #1 & #9 gave a firm, negative answer to this question. Company #9 explained that since the financial crisis of 2013 and until today, it has been a struggle to survive as a company. The main reason being the company having invested in various

big projects at the same time and hence having to find solutions for many problems arising simultaneously. The Financial Controller of the company acknowledged the meaning and importance of Crisis Management and Business Continuity Plan (BCP) for the company, yet he went on to explain that for the time being the focus is on company survival. They are therefore proceeding with projects that will yield guaranteed profit for the company. When this is achieved, they will also invest time and capital on crisis management planning. Company #1 declared that no BCP is in place at the moment, but this is on the agenda to be implemented in the near future.

Company #2 and #3, replied positively to this question. More specifically, company #2 explained how they hold a crisis management plan in place, which is ready to be put in force during crisis events such as natural disasters, earthquakes and software malwares. The plan covers important steps to be taken by each department and each member of the staff individually and collectively in the company during the crisis event. Company #3 has also implemented a crisis management plan, even though not officially documented; it can be applicable at any point.

**Interview question 9:** *How do you assess Risks in your company? What are the perceived risks that your company could trace and how do you minimize such risks?*

- Worker and third-party injuries
- Faulty work and missed deadlines
- Delay in project approval and permit
- Changes in laws and regulations for environmental issues
- Conflicts with contractors.

In this question, all participants acknowledged the suggested risks and even suggested some of their own experience. Their answers on how they assess and minimize such risks are summarized in the table below:

Perceived Risks	Company Actions to minimize risks
<b>Worker and third-party injuries</b>	<p>⇒ Companies would sign injury insurance for all employees or third-party contractors that are involved with the construction site and are exposed to the risk of construction-accidents.</p> <p>⇒ Construction workers follow health and safety lessons and are obliged to practice all protocols when entering the</p>

	<p>construction site. All health and safety instructions apply to any third-party contractors.</p> <p>⇒ First-aid experts are present on the construction site at all times during working hours, ready to provide emergency help if needed. In addition to that, all workers are aware of how to act in case of an accident or any other kind of emergency. The workers conduct workshops once in a while for such purposes.</p>
<p><b>Faulty work and missed deadlines</b></p>	<p>⇒ Faulty work is avoided by closed monitoring on the construction site.</p> <p>⇒ Signed contracts explaining fully the way the company will work throughout the project, in order to avoid any misunderstandings with the clients.</p> <p>⇒ Regarding deadlines, one participant had mentioned that in their contracts with clients, they include a clause that allows for 1-month delay from the company's side. Other than that, participants mentioned that deadline is always included in the contracts with a penalty amount in case the company misses the deadline. This acts as a motive for the company to set targets and work efficiently to finish the project on time. In cases where delay is attributed to weather conditions not allowing for the completion of the project, no penalty will be executed for the company. Having said that, most companies calculate the delays due to weather conditions in their contract with customers.</p>
<p><b>Delay in project approval and permit</b></p>	<p>⇒ Here, the participants collectively answered that government permits and approvals have always created issues for delays. In order to avoid the risk of losing a project because of unapproved permits, no contract is signed unless all permits are approved from the government and local authorities.</p>
<p><b>Changes in laws and regulations for environmental issues</b></p>	<p>⇒ Construction companies are alert to pick up on any changes approaching from the European Union or local authorities order to adapt their projects where possible and implement the changes. They never wait for the official announcement of the changes; otherwise it will be too late for them. As soon as the government starts working on a new legislation, the companies will start to adapt their procedures in order to comply with the legislation, by the time it is officially implemented by the government.</p>
<p><b>Conflicts with contractors</b></p>	<p>⇒ Companies invest a lot on contractor trust and relations, since they acknowledge the importance of having trusted</p>

people to cooperate and do the right job. Contractors' cooperation is built on long-life relationships and trust between the two parties. Contractors are not changed easily, and conflicts are eliminated through signed contracts before the commencement of any project.

- **How well prepared are companies of the construction industry at times of crisis?**

Interview question #2 pulled out the answers to this question:

***Interview question 2.** Does your company practice business continuity / contingency planning in any form?  
If NO, have there been any discussions in your company for developing a plan?  
If YES and a plan exists, is it maintained on a regular basis (and this will include updating and testing)?*

Once more, the majority of participants were not clear on the answer to this question, since in most companies, business continuity is practiced when need be and that will be in times of emergency. Yet, nothing is documented officially. Company #9 admitted that this is not in the company's immediate plans, as already mentioned in the first question, it is a matter of survival before business continuity and therefore the company is focusing on other priorities. Company #2 was confident enough to give a positive answer to the question, saying that a contingency plan is in place and tested twice a year. Regarding the rest of the companies, there is nothing officially documented regarding BCP, out of which two of the companies are already discussing with external experts to proceed with a formal procedure of BCP.

- **How do construction companies evaluate threats and opportunities?**

The objective for this research question was to get the participants to narrate real life stories from crisis events that they have gone through, in order to interpret the way, they evaluate threats and opportunities. The relevant interview questions for this subject would be 3, 4 and 5:

***Interview question 3.** During a crisis event (of any cause), what should be the first thing to be done by the company? (Choose one or more answers from below options)*

- *Hold a crisis management meeting with the crisis event members and then inform all the employees on the action plan to be followed.*
- *Contact the stakeholders of the company and keep them informed at all levels throughout the crisis period.*
- *Suspend company operations until the crisis are over.*
- *Take the opportunity to compete over rival companies.*
- *Other:*

While seven out of ten companies (#1, #3, #4, #5, #8, #9, #10) have claimed that the first thing to do in the state of emergency, would be to hold a crisis management meeting, two other companies picked the “other” option, giving their own technique during a crisis: Company #2 would activate the crisis management plan which also includes the first two options; Company #7 would assess the embedded threats and partially suspend operations, but that would also depend on the case. Company #6 seemed confident enough to declare that in case of emergency the first thing to do would be to grab the opportunity and compete over rival companies. This option of the opportunity to compete, appeared appealing to company #3, but was not the first priority. Moreover, companies #1, 5 and 9 had also discussed that the option to contact the stakeholders of the company, was also a priority, since they would be the ones that will be eventually affected. Overall, the majority of the participants would agree that holding a crisis meeting to decide the way forward in a crisis situation, is the most appealing option for a company, unless there is already a crisis plan ready to be activated, as in the case of company #2.

***Interview question 4.*** *When was the last time the company faced a crisis? And what type of crisis was it?*  
*[Socio-political; Technical (due to human fault; Natural phenomena; Site failing conditions;]*

The most recent crisis situation experienced by eight companies was the financial crisis of 2013, where all Cypriot companies in all types of industries were affected in one way or another. This kind of crisis is categorized as socio-political and financial, since it was a crisis that the whole country had been through and the government was expected to help the situation. The remaining two participating companies had a more recent situation to describe, that had put them in a state of emergency, a different scenario for each one. For company #8 it was a completely external factor that affected a prospect project due to technical complications; while all permits from the authorities had been obtained and all contracts had been signed with the parties involved, the company engineers realized at the initial work done on-site, that official water pipes supplying a

significant zone area in the capital city, were passing right through and underneath the land that was about to be developed. This let the company with no other choice, but to put the project on hold until they could find a way to solve the problem that occurred.

Company #9 had recently suffered also from a technical complication that was highly related to human fault. The company had taken over a government subsidy to proceed with asphalt paving over a big area of the capital city. Upon completion of the project and during inspection from the relevant authorities, it was revealed that one of the materials used for the paving was not compliant to European standards. In order for the subsidy to be valid, the company had to repeat the whole job using the correct materials, having to bear solely the costs of the materials used during the first time. This unexpected event had cost significant deficit for the company.

**Interview question 5.** *Did the specific event, or any other crisis event created an opportunity for growth for the company? How was it handled by the company?*

The results for this question were transcribed in detail in the table below:

<b>Company ID</b>	<b>Type of crisis experienced</b>	<b>How was the crisis handled</b>
#1	Financial crisis of 2013	Opportunity for internal restructuring.
#2	Financial crisis of 2013	Opportunity to learn from mistakes and strengthen the immune system of the company and readjust the company strategy.
#3	Financial crisis of 2013	Suspend new projects - struggle to survive.
#4	Financial crisis of 2013	Opportunity to strengthen the company internally - Focused on cost control and set priority on inflows and outflows
#5	Financial crisis of 2013	Reduced the volume of operations by focusing on the completion of existing projects. Emphasis on outflows and differentiate from competition.
#6	Financial crisis of 2013	Suspended new projects - Company expansion put on hold.
#7	Financial crisis of 2013	Suspended new projects - Company expansion put on hold
#8	Technical issue in prospect land to be developed with water pipes	Communicated with all parties involved including local authorities, in order to find a viable solution.



#9	Repetition of asphalt paving due to non-compliant materials used	Opportunity to learn from mistakes and make more thorough validations on materials in the future.
#10	Financial crisis of 2013	Opportunity to strengthen the company internally - new projects were put on hold.

The table shows in detail how each company dealt with the crisis at the time and whether they took advantage of the situation for new opportunities. As it appears from the results, most companies that referred to the financial crisis of 2013 had taken the opportunity for internal restructuring, and revision of company procedures that directly affected their costs and profits. Moreover, they had put prospect projects on hold, and focused in completing current ones without losing more money. In other words, they had preferred to reduce their volume of business since they were not in a position to take risks at the time. Most of these companies also mentioned a more thorough control on their outflows in order to cut costs where possible. Having said that, the practice of control on outflows is a practice that the companies are still following today; at the time they had realized the importance of cost control, when the budget is limited. One of the companies had mentioned that while at the time companies were putting projects on hold, it gave them time to research and find new ways to differentiate from competition.

The company that faced the technical issue with the water pipes was in serious trouble. If their project was to be suspended, then it would mean a great loss. They could not see an opportunity through this crisis event, since the problem was sourced from external factors. However, the way the company handled it was very effective, since they kept contact with the authorities until a solution could be found.

Company #9 that faced the problem with the project repetition found itself with a big loss and the only thing they could tell for sure it that even this had cost them time and budget, it was a great opportunity for them to realize that every task and every material/ tool to be used, needs to be checked and validated by the appropriate professionals before a project proceeds.

- **How do companies within the Cypriot construction sector compare when it comes to compliance towards government regulations?**

Interview question #6 was in charge to get the answers to this inquiry.

**Interview question 6.** *Is your company involved in the construction of high-rise buildings? If yes, then*  
**a)** *Do you follow and comply with the EU legislation about high rise buildings?*  
**b)** *Do you face any complications resulting to the delay in completing projects in the pipeline because of the regulations?*

Six out of ten participating companies are indeed involved in the building of high-rise projects. It is noteworthy that they are the six companies involved in diversified projects, including those who expand their activities all over Southern Cyprus and do not limit their business in their local city. The other four companies that are operating within their local city and through the construction of residential buildings, they are intentionally not involved in the construction of high-rise building, as they have confessed that such projects incur much more risks that might not be visible right from the beginning of the project.

All six companies being involved in the construction of high-rise buildings have confirmed that all necessary actions are taken in order to company with the relevant regulations. This is something that cannot be omitted, as few of the participants explained; in case of non-compliance with the EU and local legislations, the authorities might judge the building as non-compliant, and not allow any residential or commercial use of the building. In such a scenario, the losses incurred would be so high, that would risk the future of the company.

Complications always exist, from the authorities' side, mainly in the form of delays; approval for permits is delayed due to bureaucratic implications. Companies with more economic power will usually get their permits earlier, as they have the power to move higher in the pipeline than those companies who do not have a bargaining power and will receive their permits much later in relation to the date submitted.

- **How Cypriot construction companies compare regarding being autonomous, particularly in terms of developing new opportunities and generating profit without the support of governmental projects?**

The results of the interview questions 7, 8 & 10 will help compare each participating company.

***Interview question 7. How has the “Cyprus Investment program” affected your business? Is it the main route of activity for your company or do you create your own opportunities within the market?***

The Cyprus Investment program, as described in the literature review, was used by a lot of construction companies as a life board, or as boost in their business, to help those companies with cashflow problem get back on their feet and boost up the construction business in general. Only one third of the selected sample have actually used or are still using the Cyprus investment program as part of their business. The rest of the companies have been operating based on their own financial strength and creating their own opportunities in the market, targeting the local market, which has started moving upwards during the last 4 years.

Company #4, mainly dealing with the construction of residential buildings, described how the “Cyprus Investment Program” (CIP) had helped them boost their business activity after the financial crisis of 2013. The company had used the program to attract foreign clients. However now they now step on their own ability to attract foreign clients for permanent residency. Company #5 is dealing with more diversified projects and admitted that after the crisis of 2013 their business is depended to a great extent on the government incentives, even though they have returning customers who want to invest on new projects. Company #9 which is also involved in the CIP has clarified that this is not their main route of business. They have found other ways to increase business volume and profits, and that is mainly through the maintenance of big buildings like airports.

***Interview question 8. What is your targeted clientele as a company? Is your project portfolio spread over various types of projects or do you specialize in specific types of projects only?***

Business activity for companies #4, #6, #7, #8, is concentrated on the residential sector and therefore their client portfolio is limited in that sector. Though company #4 clarified that they focus mostly on foreign markets, in order to approach clients who want to invest in the Cyprus property market. In this way they manage to have variety in their clientele, in order to avoid risks incurred within the local market. Companies #4 and 6, also engage with real estate management, where they own, rent and manage buildings for residential use. Both companies stated that this area of their business is usually risk free and guaranteed profits. Real estate management has kept both companies profitable during the crisis of 2013. Companies #7 and 8 both seem to focus in selling apartments or houses to young families. Both companies insisted that they keep doing what they know best, even if this means not spreading their portfolio.

The rest of the participants which make 60% of total sample, declared a broader client portfolio, undertaking projects that are not restricted for commercial or residential use. Some examples include resort hotels, shopping malls, airport maintenance, skyscrapers through investors' capital. Company #5 is aiming at developing premium and non-repetitive projects and their portfolio moves according to opportunities created in the market. Whereas company #2 is moving flexibly around the market with open minded ideas.

***Interview question 10. Do you believe that you create your own market path, or you usually move along market trends and what is already imposed by rival companies?***

All of the participants had stated that there should be a balance between these two ideas. Companies #3 and #9, both being involved in diversified projects prefer to follow what is available in the market, instead of risking their profits on new ideas. The rest of the companies, small, medium or large size enterprise, they do follow market trends, though they are always alert to take advantage of market changes and create their own opportunities. Company #2 mentioned that it is essential to follow the market, in order to be able to adjust the company's ideas based on the market needs. Company #8 mentioned that even though they follow the market's trends, they try to create their own trademark, by providing unique and innovative ideas of house and apartment building for residential use. Company #7 combine reasonable prices with high quality projects and this is what they believe differentiates them from other companies.

On a general note, it seemed that the majority of the participating companies try to take measures to avoid crisis and when a crisis hits, they deal with it on the spot. As the representative from company #10 mentioned, the issues that have to be solved are so many in a case of a big crisis event, that they cannot practice everything and perform tests on a regular basis, this will consume time and money needed to be speared on ongoing projects.

# CHAPTER 5

## DISCUSSION

### 5.1: Introduction

In this last section of the dissertation research, the main aim is to give meaning to the results analysed in chapter 4 draw conclusions and eventually link the results to the empirical search cited in the literature review. Once again it is being reminded that qualitative methods have been used for the data collection and face to face interviews were conducted, taking a total sample of ten companies operating in the construction industry, the results of which were presented and analyzed in chapter 4. The subsections of this chapter entail the interpretation on the findings, limitations incurring on the results, implications for theory and practice, recommendations for future research and the conclusions drawn on the research study.

### 5.2: Interpretation of Findings

In this subsection, the results yielded for each research question will be discussed further to give an interpretation.

- **How crisis management is used, if at all?**

The answers received for the first question, revealed that no proper crisis management plan exists in construction companies, since only one of the participating companies answered positively to the question saying that they indeed have a proper crisis management plan. The company with the positive answer demonstrated how seriously the company takes the concept of crisis management plan, explaining how all parties involved meet to take decisions about crisis management in times of emergency. The rest of the companies gave very vague replies on the subject, all leading to the same conclusion; it is more practical and convenient to solve a problematic situation on the spot, instead of preparing solutions for different scenarios that might or might not occur. Of course, this is not a simple practice; usually in the event of a crisis, the company

needs time to understand the size and type of the problem before action is taken. The business impact should be measured and the steps to be followed should be decided diligently, taking into consideration the stakeholders' interests, while leading the way out of the crisis. However, the bulk of information to be gathered from all existing channels is dramatically increased during a crisis (William 1957). This combined with the stress and time pressure, impedes the task of decision makers during a crisis (Hale et al., 2005).

Companies do not even hold a proper crisis management department to deal with the concept; This could be reasonable for the small family run businesses, but companies that fall in the medium-large enterprises and excluding company #2, who demonstrated a proper crisis plan in place, defended their reply, by providing ways that they conduct, in order to avoid risks. They however missed the essence of the question, which was whether they are ready as a company to respond to any kind and size of crisis event. One of the reasons most companies do not operate a crisis management department is the fact that crises are thought to be low probability events (Loosemore, 2000) and companies cannot afford to spend their budget planning for something that might or might not happen.

The participants' answers for question nine, which referred to risk identification, assessment and elimination process, were very similar with each other, specifically regarding work accidents and health and safety issues at work. This is mostly attributed to the mandatory procedures that companies within the industry have to follow according to legislations issued by the Department of Labour Inspection, including regulations of 2015 R.A.A. 410/2015, R.A.A. 131/2012 and R.A.A 409/2015 as presented by the official website of the Department of Labor Inspection (Source: <http://www.mlsi.gov.cy>). These legislations require the responsibility of companies towards their workforce and the society in general. Therefore, risks identified and discussed including worker and third-party injuries, clauses for missed deadlines on the company's responsibility, implementations of changes in the laws and regulations are compulsory fields for the companies that should be followed. Despite the fact that contracts and procedures are being followed methodically by all companies due to legal enforcement, they are by nature risk minimization procedures, and even though no crisis management exists, through the said contracts and procedures, companies are secured and are able to accelerate their response level at the time of a crisis.

- **How well prepared are companies of the construction industry at times of crisis?**

In order to identify the level of preparedness in the companies, participants were asked to present their business continuity plan. Participants seemed to familiarize with the concept of business continuity, it was obvious however from their replies, which they lacked knowledge and understanding on the importance of crisis management to be practiced within companies. The common reply that “BCP is in the future plans of the company to be developed”, proves that the companies do not consider crisis management a priority for the company. Once again, only one out of ten participating companies demonstrated that a proper BCP has been implemented and being tested twice a year based on several case scenarios. The rest of the answers received, demonstrated that the companies follow what is deemed necessary and regulatory according to government regulations, which have been issued after the experience of real crisis events, in an attempt to eliminate recurrence. Companies in this industry have the bad mentality of focusing on turnover maximization, without considering the high-risk environment that they are operating in.

- **How do construction companies evaluate threats and opportunities?**

In question three, participants were asked to select the priority action to be done during a real crisis event; the most popular answer was “hold a crisis management meeting in order to decide the way forward and communicate it to all relevant parties including stakeholders”. This feedback justifies that crisis communication is a highly important, critical and highly perceived discipline for companies, that helps them react, inform and interact with their stakeholder groups concerning the crisis situation (Fronz, 2011). Moreover, as Turner et al (2007) suggest, communicating through these meetings is the ultimate opportunity for the company to escape the crisis and strengthen stakeholder relationships. Hence, through the participants’ replies, it is evident that company executives understand and realize the importance of communication during a crisis. By focusing on communication channels, the company becomes stronger to face any threat that comes along and ready to turn them into opportunities. This is what participating companies seem to be doing.



Questions four and five asked the participants to describe a recent crisis event that they have experienced and how they managed to overcome it. Most companies had a common event to describe, being the 2013 financial crisis, which had hit severely the construction industry. Companies described how lessons were learned through the crisis and opportunities for internal restructuring and reorganization were created. While slowing down their work pace and business turnover, companies were forced to focus on other factors that are equally important, such as the cashflow management and internal reorganization. Other participants did not refer to the financial crisis, but instead described a technical problem that they had faced. They demonstrated a sensible way of handling the case, and the lessons learned to avoid similar situations where possible. All replies regarding crisis experience had left a positive note throughout the discussion, justifying the fact that companies have indeed learned from the experience and the positive changes that occurred. However, no allusion was made for new business opportunities during or after the crisis except from one company who thought of the idea interesting but did not necessarily acted in this direction during the crisis. The focus remained on internal reorganization.

- **How do companies within the Cypriot construction sector compare when it comes to compliance towards government regulations?**

Since a lot of arguments appeared in the literature review regarding the new era of skyscrapers construction and the amphibolies whether all regulations are met regarding the health and safety of the buildings, participants were directly asked the question whether they follow the government legislation on skyscrapers or not. It was remarkable that from the selected sample only one third had actively engaged in the construction of high-rise buildings, these being the companies of larger size and with higher turnover. The rest of the companies proclaimed that they follow a more risk adverse strategy, keeping at what they know best. Nevertheless, they still have to follow government laws and regulations and they indeed gave a positive answer to that, stating that justifying compliance with the government legislations is part of the permit application. Hence all protocols are being followed, as they do not want to risk losing prospect projects.

Companies involved in the construction of hi-rise buildings, argued that not only they follow the European commission's regulations, they even have to train local authorities on how to validate their projects in order to proceed with the approval of building permits due to their lack of experience on such buildings. Moreover, participants' replies showed that companies are systematic in terms of regulations and they follow up updates and amendments on the regulations, so that they can apply them in their procedures and keep their buildings compliant. It is critical for them to be up to date regarding new rules and regulations. One of the companies even mentioned that they employ third party international consultants who have more experience in this type of buildings in an attempt to help them meet the specifications and construct their buildings in a safe, yet environmentally friendly way. It is evident that companies pay extra attention on the quality of their projects and want to follow all legislations laid either by the government or the European Commission, not only to obtain the building permits, but to improve the quality of buildings towards the environment and public welfare in general. This is also justified in the article of Andria Kades (2017) for the Cyprus Mail newspaper, describing how new high-rise projects demand environmental studies to be submitted prior to permit approvals.

- **How Cypriot construction companies compare regarding being autonomous, particularly in terms of developing new opportunities and generating profit without the support of governmental projects?**

Comparing answers to questions 7, 8 and 10, the aim was to understand which companies and for which reasons depend more intensely on government programs for business development (question 7) and examine the qualities of those who trigger their own opportunities in the market, rather than follow trends established by others (question 10). Moreover, in question 8 companies described the features of their portfolio and how it is spread to the various markets, in a way that they minimize risk.

The majority of companies participating in this study that made use of the government incentives did it only for a very limited period of time. More specifically and taking the example of company #4, they have used the incentives introduced by government in attracting foreign investors right after the financial crisis of 2013, in an attempt to boost their turnover. As soon as the company gathered a substantial portfolio of clients, including returning customers, they preferred to continue working on their own abilities

to create opportunities for their company, by pioneering in foreign markets based on their own marketing ideas. Other participants supported the same philosophy and interestingly enough, the smaller size and/or family-run businesses claimed that they currently do not depend at all on any government programs. They are rather involved in the local market; targeting young families who want to purchase residential properties for own use or occupancy. During the last four years, the local market for residential buildings has flourished again, with a constant upward trend. Based on published statistics, in July 2019 the building permits for the construction of new homes had increased to 1,028, an increase of 62.7% compared to the 632 new homes in July 2018 (Howarth, 2019).

Despite the positive trends, companies should find ways to focus on more than one aspect of the business or attract more than one market types, in their attempt to spread their portfolio risk. Participants dealing with diversified projects are able to distribute their portfolio risk over the variety of projects they undertake under various sectors. The companies dealing exclusively with residential building are running the risk of being trapped in cases of a crisis. Two out of four companies engaging in residential building explained that they are not entirely relying on the construction of buildings; they also engage in real estate management; hence they receive income from rent and maintenance which in times of recession this will be a steady income for the company. The other two companies of the same category, even though their client portfolio does not vary, they are confident that the unique way they work with their clients is what makes them different from others and more competitive to survive in times of crisis as well. For example, investing in research for foreign markets, other than those suggested by the government or introducing innovative ways of house building, and hence creating establishing competitive advantage over rival companies.

Larger size enterprises still make use of the government's residency program until today, yet they have clarified that do not depend solely on these projects; they undertake diversified projects, their clients vary from private individuals, to high net worth investors, as well as government projects. In this way they are able to spread their portfolio risk. These types of companies have claimed that when it comes to market trends, it is best to combine own opportunities as well as adjusting business to

meet market needs where is deemed necessary. Based on this approach, companies operate in a safer environment, while engaging in a variety of projects.

### **5.3: Limitations**

Even though the research results seem satisfactory, there are always limitations that restrict the research from being perfect. Below are a few points that limit the success of this research.

Point one is the size of the sample. The original aim of the researcher was to approach 17 companies from all cities of Southern Cyprus, and take interviews from up to three professionals at key positions from each company. However, the final sample gathered was one professional from ten different companies. Considering that Cyprus is a small country, one would say that the sample is satisfying; Based on the size of the construction industry however, a bigger sample would yield more satisfying results.

The sample lacks diversity to some extent location wise. The selected sample was not equally selected from all cities of Cyprus, omitting to a great extent companies based in Limassol where most high-rise projects are constructed.

The timing of the data collection had negatively affected the process; the pandemic virus of Covid-19 had burst out halfway through, leading to a complete lockdown and the companies having to deal with a real crisis would not return any further requests for research participation. Hence the research proceeded with whatever information was gathered by that time, containing the limitations discussed in the above paragraphs.

Last but not least, there were some confounding variables that occurred during various interview meetings, like for example, the need of the participant to prove that their company is on top of things and controlling any unexpected factor that would affect the company's normal operation and profit. This variable would lead the participant to give vague answers when the questions of BCP and crisis management procedures appeared in the discussion.

## 5.4: Implications for Theory Practice

Despite the solid frameworks for crisis management laid out throughout the literature review and the way it may be incorporated in the daily business of construction companies, research results demonstrate that such frameworks are far from being put in practice from Cypriot construction companies. Nevertheless, through the analysis, it could be justified that companies unintentionally use the solving approach of the crisis management approaches described, as proposed by Babu and Sadhakar (2016), since as per the information gathered, the majority of participants claimed that they do not hold a crisis management plan, rather solve each event that appears on the spot. However, even if this approach is put in practice during the crisis event, it still entails some planning that has to be done in advance, in order to help managers at the time of emergency act in the right way. This planning section of the solving approach could not be justified based on the participants' replies.

The level of preparedness within these companies in terms of business continuity planning is minimal, since as it was revealed, that it is either not a priority or very difficult to fit the complex environment of construction companies. Companies acknowledge the importance of preparedness, yet they keep postponing implementing a business continuity plan, trying to persuade themselves and their stakeholders that they act on a best effort's basis to safeguard their interests. As described in the literature review, implementing business continuity planning entails a lot of work from all functions of the company, since parameters in all levels of a project should be considered from the design until the testing part. To achieve this, dedicated professionals should be employed exclusively for this purpose and form a department dedicated for the management of the whole project. Instead, the bulk of participants seem to have compromised through the contracts prepared and signed by all parties cooperating in a project, that cover all risky parts, i.e.: health & safety, handover delays, disaster events.

Risk identification, assessment, mitigation and monitoring are the key components suggested by Hallgren & Wilson (2008) that help Risk managers evaluate threats. This partly supports the participants' answers on how they identify threats. Despite the fact that risk department or crisis management department does not exist in the majority of the participating companies based on the answers received, experience and past events

has taught companies to take preliminary measures such as the contractual agreement with different parties involved, in order to minimize the risk or damage incurred. One could justify some application of Risk Register tools, without the actual acknowledge and systematic of all relevant risks. A Risk Register is a tool for documenting risks and actions to manage each risk. It is an essential part of successful management of risk. As risks are identified, they are logged on the register and actions are taken to respond to the risk (Source: <https://www.stakeholdermap.com>). Companies have also described how recent crisis events which have taught them how to grab opportunities either for internal restructuring and improved organization methods, as well as how to face competition while surviving the crisis and getting stronger out of it.

Moving on to the issues regarding the compliance of companies towards governmental and European legislation, it has been already justified that companies strictly follow the regulations set, as the compliance is a prerequisite for permit approvals. Companies being involved in any type construction, regardless the size of the building, they are diligent in following all imposed laws around their field. Companies themselves are even more prudent in implementing the correct standards, otherwise they would be jeopardizing the future of their business. Moreover, since no crisis management plan exists, they make sure that no slips will occur from inside their organization, in order to focus on emergency events emerging from their external environment.

The final research objective, the comparative examples regarding the autonomy on client portfolio and business projects of the companies, proved that companies in the selected sample are divided into two different categories. Under the first category, belong the companies that follow a specific direction, in constructing exclusively residential buildings mainly for housing purposes and their clients are limited to the local market. In this way they do not depend on government programs, instead they create their own projects and attract their clients through own marketing campaigns. The risk of their portfolio not being spread evenly throughout the market, is minimized in the cases where their businesses involve real estate management of own buildings, where rent is being collected on a monthly basis, and this could be considered less risky in case of a crisis outburst in the financial sector let's say. In the second category, companies being involved in more diversified projects are found, including those engaging in the construction of high-rise buildings. In this category, there are companies

that do take advantage of government support programs. However, they do study the market and are flexible to adapt their projects to the market needs. This entails that they follow changes and trends in the market and are ready to incorporate such trends and changes in their projects, in order to be in a position to sell at the end of the day, despite the economy status.

## **5.5: Next Steps and Recommendations for Future Research**

The results of this study, outlay the way companies face crises and how prepared they are for unexpected events. Even though no formal procedures exist, companies were confident that they could solve anything that comes along, provided the company executives discuss and take decisions for the best interests of the company and its stakeholders. It would be prudent however, to perform a follow-up research on this study, preferably with a different sample. For example, the selected sample could be more targeted and should be based on the type of projects each company constructs. More preferably, the sample could be focused on companies exclusively involved with high rise buildings, since that is where higher risks lie. Definitely a higher sample would be taken, including workforce directly from the construction site, where the true picture of the company will be demonstrated.

Another way for a follow-up research would be to compare the results to a research for companies based in a different country. This would enable the research to get a more global opinion by comparing where are foreign companies regarding their level of preparedness status, and whether the follow and test business continuity plan. Moreover, different qualitative methods could be used, for example case study analysis. In this way more in-depth interviews will be performed, and the researcher will have the right for extensive follow-up questions. Using exploratory and explanatory case study methods, more interaction will be fueled between the interviewer and the interviewee.

Last but not least, people from the local authorities could be interviewed to examine the tools they use and the protocols they follow before they approve a new building permit. There are so many people involved in the construction of a new building and so many

parameters that have to be taken into consideration, therefore undertaking a follow-up of this study would be wise to take these parameters into account.

## **5.6: Conclusion**

This research study has proved what was greatly feared, the fact that crisis management frameworks are not put to practice in real life. While interviewing the participants, several realizations were made; Professionals within the construction industry are doers. In other words, they are action oriented with a practical orientation and for them it is more practical to solve issues as they arise, to the best of their abilities. Nevertheless, some procedures described have revealed that companies instinctively follow some laid frameworks, not in a systemic way, but due to their obligation towards governmental laws and regulations on construction.

Hence threats are indeed identified through these procedures and opportunities are created through their attempt to understand and approach the market needs. The drawback that however persists is the inadequate procedures for crisis preparedness. It is vital to stress out that the construction companies should start working on implementing a business continuity plan. Emergency plan should be developed for various case scenarios, in order to be ready to face any crisis that bursts out. It is indeed a complex environment the construction industry, that is why companies should employ professionals for the design, management, control and monitoring of the BCP. This is a full-time job and not something that can be done simultaneously from the operations manager for example. Alternatively, BCP can be outsourced to a specialized company that can comprise a BCP for the company, educate the employees on how to act and take decisions during crises.



# Appendix 1

## Interview Questions

### **PART A: Demographics**

Nationality: .....

Age Bracket:

- Less than 25    \_\_\_
- 25-35            \_\_\_
- 36-45            \_\_\_
- 46-55            \_\_\_
- 55-65            \_\_\_
- Over 65            \_\_\_

Gender:        Female: .....        Male: .....

Position and role in the company:

.....

Type of business operations:

Construction        Developer        Real Estate

### **PART B: Interview Questions**

1. Does a crisis management plan (or Business Continuity Plan) exist in the company?
  - a. NO \_\_\_
  - b. YES \_\_\_
  - c. If yes, below please provide a short description of the plan including areas of business and issues the plan covers.

2. Does your company practice business continuity / contingency planning in any form?

If NO, have there been any discussions in your company for developing a plan?	If YES and a plan exists, is it maintained on a regular basis (and this will include updating and testing)?

**3.** During a crisis event (of any cause), what should be the first think to be done by the company? (choose one or more answers from below options)

- Hold a crisis management meeting with the crisis event members and then inform all the employees on the action plan to be followed.
- Contact the stakeholders of the company and keep them informed at all levels throughout the crisis period.
- Suspend company operations until the crisis is over.
- Take the opportunity to compete over rival companies.
- Other: \_\_\_\_\_

**4.** When was the last time the company faced a crisis? And what type of crisis was it? [socio-political? Technical (due to human fault)? Natural phenomena? Site failing conditions?]

**5.** Did the specific event, or any other crisis event created an opportunity for growth for the company? How was it handled by the company?

**6.** Is your company involved in the construction of high-rise buildings? If yes, then  
a) Do you follow and comply with the EU legislation about high rise buildings?

b) Do you face any complications resulting to the delay in completing projects in the pipeline because of the regulations?

7. How has the “Cyprus Investment program” affected your business? Is it the main route of activity for your company or do you create your own opportunities within the market?

8. What is your targeted clientele as a company? Is your project portfolio spread over various types of projects or do you specialize in specific types of projects only?

9. How do you assess Risks in your company? What are the perceived risks that your company could trace and how do you minimize such risks?

- Worker and third-party injuries
- Faulty work and missed deadlines
- Delay in project approval and permit
- Changes in laws and regulations for environmental issues
- Conflicts with contractors.

10. Do you believe that you create your own market path, or you usually move along market

trends and what is already imposed by rival companies?



**PART C: General Comments and feedback**

Thank you

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