ERASMUS SCHOOL OF ECONOMICS

Measuring theories to engage in M&As between SMEs and large enterprises in the Netherlands

Master thesis

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Academic research provides numerous theories concerning drivers that trigger merger and acquisition (M&A) behaviour. However, prior research has not yet made a clear distinction between the drivers of small and medium enterprises (SMEs) and large enterprises to engage in M&A activity. This thesis is focussed upon these differences of SMEs and large enterprises in the Netherlands. It does so, by first providing a clear overview of earlier research providing theories of drivers to engage in M&A activity. These theories are presented as 'value increasing drivers', 'value decreasing self-interest drivers', 'external environmental drivers', and 'firm characteristic drivers'. Next, these theories are empirically analysed with the help of a proxy for each driver. The results of this empirical analysis provide evidence for differences in value increasing drivers and firm characteristic drivers. Evidence is found for Dutch SMEs, who engage in M&A activity during the analysed period, rely more on external growth than Dutch large enterprises. The results also provide significant evidence for a negative (positive) relation between increasing enterprise size and cash (stock) as means of payment, for Dutch SMEs and Dutch large enterprises. The findings of this research extent existing literature with evidence, which suggests that the behaviour and financial success of M&As by SMEs significantly differ from large enterprises. Therefore, because of the research from this thesis, current M&A theories should be reconsidered and corrected for SMEs in the Netherlands.

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1. Introduction

Over the past decades mergers and acquisitions (M&As), next to strategic alliances and joint ventures, have been an important and popular source of growth and corporate development for numerous enterprises (Bauer et al., 2014). This non-organic M&A growth strategy involves an enterprise, the acquirer, seeking to purchase the assets of another enterprise, the target (Hanson, 1987). The acquisition is financed either with equity, cash, or debt. To emphasize on the popularity of M&A activity; globally 30,000 acquisitions were completed in 2005, and the total value of these transactions was $1,900 billion (Cartwright & Schoenberg, 2006). In the year 2006, M&A activity continued this growing trend with a total transaction value of $3,790 billion worldwide (Barkema & Schijven, 2008). Deal activity slowed dramatically in 2008 and 2009 due to the global financial crisis but resumed again in 2010 and it has remained popular, as the global M&A volume of 2015 has surpassed the transaction value of $4,000 billion for the first time on record (Read, 2015).

Due to the popularity of M&A activity among enterprises, it has been a popular academic research topic within finance, business, and economics. However, in a paradox to their popularity, M&As appear to provide at best a mixed performance to the broad range of stakeholders involved. Failure rates on M&A projects remain consistently high. Enterprises who have acquired the target, frequently experience share price underperformance in the months following the transaction, which is inherent with lesser performance (Agrawal and Jafe, 2000). When analysing past data on M&A, it becomes clear that a substantial amount of M&A projects do not only fail to deliver their intended benefits, but can also destroy economic value in the process. Past research provides evidence for failure rates of M&A projects being somewhere between 70% and 90% in the long run (Christensen et al., 2011). Reason for these disappointing findings may be that the measure of performance used in these studies does not adequately measure the true performance achieved by the enterprises involved in the M&A project and do not take into account the effects of M&A size.

Past research is primarily focused on large enterprises engaging in M&A activity. Consequently, precious little attention has been devoted to the question of small and medium sized enterprises (SMEs). And yet, SMEs are anything but insignificant (Weitzel & McCarhty, 2011). SMEs make up 99.8% of all businesses in the European Union. The same numbers account for the Netherlands, where 99.8% of total businesses are covered by SMEs. They provide two out of three jobs in the private sector and they create more than half of total value added. At a global level, SMEs may even be responsible for 40% to 50% of world GDP (European Commission, 2005). With the importance of SMEs in the European economy, M&As within SMEs are becoming gradually more popular (Varamäki, 2014). A factor contributing to the increasing amount of M&A activity among SMEs is the aging of entrepreneurs. The aging of entrepreneurs in combination with an increasing popularity among enterprises looking for buyers and successors, offer great possibilities for younger entrepreneurs to realize expansion of their existing businesses in a non-organic way (Varamäki, 2014).

1.2 Problem definition & statement

Although research claims M&A projects produce high failure rates, it continues to remain its popularity among small, medium, and large enterprises. Research provides numerous drivers that trigger M&A behaviour. The focus of this earlier research, however, has always been on the role of the large enterprises engaging in M&A projects. Therefore few studies have been devoted to the M&A projects involving SMEs. According to Weitzel & McCarthy (2011) the reason SMEs receive little attention is because most SMEs are not publicly quoted. This makes it difficult to obtain reliable data on their general activity. However, M&A strategy has become increasingly popular among SMEs and according to the authors Moeller et al. (2004), SMEs outperform large enterprises after they make an acquisition announcement. Therefore, enterprise size does seem to matter. Despite the study of Moeller et al. (2004) and Weitzel & McCarthy (2011), very few studies focus on the drivers of SMEs to engage in M&A activity. Both authors find differences between the drivers of large enterprises and SMEs. Study of Moeller et al. (2004) for example, provides evidence for smaller firms outperforming larger firms on acquisition performance. The study of Weitzel & McCarty (2011) also provides evidence for this theory by concluding that the financial success of M&A, by SMEs, is indeed significantly different to large public enterprises. The goal of this thesis is to provide existing literature, findings regarding possible differences between the drivers for M&A activity of SMEs and large enterprises in the Netherlands. The outcome of the research by this thesis will extent literature on the topic M&A activity among SMEs.

Due to the fact that prior research, concerning the drivers for M&A activity, has not yet made a clear distinction between SMEs and large enterprises, this thesis will focus upon the possible differences between the drivers of managers or shareholders, being the key decision makers, of large enterprises and these of the shareholders of SMEs, for engaging in M&A projects in the Dutch M&A market. The research question of this thesis will therefore be:

What are the theories to engage in M&A projects, and do these theories differ between large enterprises and SME in the Netherlands?

In order to provide a clear answer on the main research question, this thesis applies four different sub-questions to narrow down the main research question. These sub-questions are addressed in the literature review and empirically considered in the part following the literature review.

The first sub-question concerns SMEs. For an answer of the main research question, a definition of a SME is needed, including their characteristics, a description of their important economic role in society, and their strengths and weaknesses. The sub-question provides a complete overview of all important literature concerning SMEs. The first sub-question concerning SMEs is:

How are SMEs defined, what is their role in the Dutch society, and what are their strengths and weaknesses?

The second sub-question concerns M&A projects. A study of the current state of leading academic literature on M&As must provide a definition and description, including the different stages

and different types, the reasons for successfulness of M&A activity, and reason for failure of M&A activity. With this information the main research question is helped answered. The second sub-question regarding M&A is:

What are the critical factors in each M&A phase, and how does it impact the outcome and performance of M&A activity?

The third sub-question concerns the drivers of M&A activity among large enterprises, as this thesis aims to provide differences between the drivers of SMEs and large enterprises. Earlier research, concerning drivers for M&A activity, must be analysed in order to give an overview. The third sub-question is:

What are the theories of drivers of large enterprises to engage in M&A activity?

After analysing and answering the first three sub-questions, a clear overview is provided concerning what SMEs are, what M&A is, and why M&A activity occurs among large enterprises. The following part, and fourth sub-question, describes, by logical reasoning, if and how the earlier explained drivers are applicable to SMEs. Each theory is analysed in order to find out if it can be applied in the SME M&A market. The applicability is translated into three hypotheses which will be empirically analysed further in this thesis. The fourth sub-question is:

How can the theory of drivers for M&A activity be applied to SMEs?

When all sub-questions are analysed and answered in the literature review, a complete overview of information is gathered concerning every topic of the main research question. The three hypotheses, which are formed according to the fourth sub-question, are empirically analysed to provide a complete answer on the main research question.

1.3 Academic relevance

Understanding the drivers for enterprises to engage in M&A activity is key in understanding M&A success or failure (Seth et al., 2002). Therefore, in order to reduce future M&A failure rates and thus providing evidence for M&A projects to become more successful and profitable in the long-term among SMEs, research must gain a deeper understanding of the drivers of SMES for M&A behaviour. Subsequently, extensively developed drivers for M&As lead to improved acquisition performance (Bartels et al., 2006). This thesis aims to contribute current literature and therefore it is of academic relevance.

As mentioned earlier, research has always been focused on the role of large enterprises engaging in M&A projects. This thesis will provide an extensive literature overview, containing relevant and leading academic literature concerning these drivers for M&A activity. In order to address the gap in literature between large enterprises and SMEs, this research will compare the drivers for engagement in M&A projects between large enterprises and SMEs. The findings of this thesis provide existing literature evidence, which suggests that the behaviour and financial success of M&As by SMEs significantly differ from large enterprises. Subsequently, current M&A theories,

which include the drivers for these M&A projects, should be reconsidered and corrected for SMEs. The corrected and improved literature can be of added value to the strategy development for expansion for both large enterprises and SMEs.

1.4 Research design

The literature review, chapter 2, of this thesis covers the leading academic literature concerning and defining SMEs, M&As, and the drivers of large enterprises for M&A behaviour. It contains answers of all the earlier mentioned sub-questions. The literature review presents all the theory needed for understanding the topics presented in the main research question. These theories are translated into three different hypotheses. To further study and provide a complete answer on the main research question, an empirical research, containing differences between SMEs and large enterprises, is conducted. By empirically considering and commenting upon the applicability of these theories, the formed hypotheses are analysed. The different drivers to engage in M&A activity are formed into proxies. Subsequently, these proxies are analysed whether or not they have significant impact on SMEs. In doing so, data on all M&As in the Netherlands between 2005 and 2015 is collected from data base; Thomson One. The description of the data, methods, and models conducted, is in chapter 4, as described in the next part; thesis outline.

1.5 Thesis outline

In order to fully understand and to answer the main question as best as possible, this thesis is structured as follows: chapter 2 provides a complete literature review containing the first three sub-questions, including their answers. The first part of the theoretical background contains an overview of existing academic literature on SMEs in part 2.1, and an overview of existing academic literature on M&As in part 2.2, followed by part 2.3, which provides a literature overview of the drivers for large enterprises to engage in M&A activity. Chapter 3 analyses existing theories in order to find out whether these theories are applicable to SMEs. In doing so, three hypotheses are formed. Consequently, chapter 4 provides the research design conducted in this thesis. This chapter contains the data description in part 4.1, and the methodology used in empirically testing whether to accept or to reject the hypotheses in part 4.2. The results of the tests are presented and concluded in chapter 5. Chapter 6 will conclude this thesis, as the main question is answered. The chapter (6) will consist of limitations and propositions for future research. This chapter is followed by a list of the quoted works in this thesis, followed by the appendix.

2. Literature review

2.1 SMEs

This part of the literature review discusses and reviews leading academic literature on the concepts of SMEs. This part starts with an introduction and quantitative definitions of SMEs, followed by their qualitative definition, or characteristics, which includes a complete overview of earlier relevant academic research regarding the topic. Next, the economic role of SMEs is described, followed by their strengths and weaknesses, followed by a conclusion. Important note; this research concerns Dutch SMEs and Dutch large enterprises.

2.1.1 Quantitative definition of SMEs

Over the past decades, different definitions, qualitative and quantitative, have been provided in order to propose a complete definition of a SME. Due to the research area of this thesis, being the Dutch market, the definition of the European Commission (EC) is consulted in order to provide a quantitative definition. The EC regularly monitors the implementation of the SME definition. An independent study carried out in 2012 concluded that there is no need for a major revision of the 2005 SME definition of the EC (European Commission, 2015). Due to the unification of the European Union (EU), the EC standardized the definition of the aspects of SMEs for all members of the EU, including the Netherlands.

The first concept defined is an enterprise. The EC defines an enterprise as "any entity engaged in an economic activity, irrespective of its legal form". This may include family businesses, partnerships and associations regularly engaged in an economic activity (European Commission, 2005). Following this definition of the EC, enterprises qualify as micro, small or medium sized if they fulfil three criteria. These criteria are *staff headcount, turnover* and *total assets.* It is compulsory to meet the staff headcount threshold, and when a SME does fulfil this threshold, at least one of the conditions, the turnover or the asset criterion, has to be satisfied. Table 1 provides a clear overview of the definition of SME by the EC (European Commission, 2005).

Table 1: *quantitative definition of a SME by European Commission*

Category	**Staff headcount**	**Turnover***	**Total assets***
Large Enterprises	≥ 250	> € 50 m	> € 43 m
Medium Enterprises	< 250	≤ € 50 m	≤ € 43 m
Small Enterprises	< 50	≤ € 10 m	≤ € 10 m
Micro Enterprises	< 10	≤ € 2 m	≤ € 2 m

**At least one of these conditions has to be satisfied in combination with staff headcount*

2.1.2 Qualitative definition of SMEs

Besides the quantitative definition of SMEs, earlier research shows SMEs also share qualitative definitions, or characteristics, differentiating them from large enterprises. The first obvious characteristic of SMEs is their size, which has particular consequences for its daily business (Bharati & Chaudhury 2015). They suffer from dis-economies of scale and are much more constrained in their growth and business activities as a consequence. According to Lukács (2005), a detailed description of the key characteristics of a SME is that of the Bolton Committee in its 1971 Report on Small Firms. This report stated that a SME is an independent business, managed by its owner or part owners, and having a small market share. Due to the owner being in control of the enterprise, some of the costs that arise from agency issues, which are characteristics of large enterprises, do not occur and do not exist among SMEs (Spence, 1999). The research of the authors Goffee & Scase (1995) also states that indeed, the search for independence typically is a critical factor in motivating owner-managers to start their own business.

Research of Spence (1999) defines six characteristics of SMEs. The author states: "Small firms tend to be independent and owner-managed, stretched by multitasking (by the owner), limited cash flows and 'fire-fighting' (to process of the SME trying to survive in the short term), built on personal relationships, mistrustful of bureaucracy and controlled by informal mechanisms" (Spence, 1999). Nooteboom (1994) also states that SMEs are characterized by independency. According to the author the most important core characteristic of a SME is its diversity. Besides independency and diversity the author also names small scale and personality, which is the orientation towards personal values and goals, as core characteristics. The prominent role of the owner is again emphasized by research of Vyakarnam et al. (1997). The authors explore ethics from the perspective of SME owners, and conclude that some of the notions connected to business ethics in large enterprises do relate to the process in SMEs. These factors include the personal characteristics of the owner of the SME and particularly the extent to which they can become detached themselves from the business and its various stakeholders (Vyakarnam et al., 1997).

Besides this research, Masurel (2004) provides the following distinctive characteristics; a SME's owner has a prominent role, SMEs are short term focused, are small scaled, have a more regional and local focus, have a complicated performance measurement, are very likely to be a family business, have a low degree of formalization, and a high degree of specialization.

Earlier mentioned research proves it is well acknowledged and accepted that SMEs have unique characteristics that differentiate them from large enterprises, being determined by the inherent characteristics and behaviours of the owner. Gilmore et al. (2001) provides a variety of limitations of SMEs. Such limitations are summarized as limited resources (such as finance, time and marketing knowledge), lack of specialist expertise (owner-managers tend to be generalists rather than specialists), and limited impact in the marketplace. Consequently, the decisions which are made in SMEs take place in a random and apparently chaotic way (Gilmore et al., 2001).

Furthermore, SMEs tend to have family boards of directors and few non-director shareholders (Storey et al., 1987). Accounting practices tend to be unsophisticated and capital comes largely through borrowing. Accordingly, the authors apply the tests from earlier research to their database and document the findings and their differences from earlier conclusions. They find age of an enterprise significantly having an effect on SME performance but irrelevant in the case of large enterprise performance.

Most recent study on the topic is that of the authors Bharati & Chaudhury (2015). They state a small firm is "not a little big business". The authors provide a review of the current state of research on SMEs including their characteristics. They describe SMEs characteristics summarized as: 1) their (small) size having impact on their business, 2) the low risk propensity due to the small asset bases, 3) centralization and low formalism level due the decision making power within a SME is held closely by the owners and top managers and 4) cultural insularity and identity-based trust relationships.
In order to better distinguish all of the earlier described quantitative characteristics, an overview is provided in table 2. The order of characteristics in table 2 is determined by the quantity of quoted characteristics by research that is evaluated and named in this thesis.

Table 2: *qualitative definition of a SME by earlier research*

Characteristic[(1)]	**Research**[(2)]
Independent (and owner-managed)	Nooteboom (1994), Goffee & Scase (1995), Vyakarnam et al. (1997), Spence (1999), Gilmore et al. (2001), Masurel (2004), Bharati & Chaudhury (2015)
Personal relationships	Nooteboom (1994), Vyakarnam et al. (1997), Spence (1999), Bharati & Chaudhury (2015)
Limited tangibles and intangibles	Storey et al. (1987), Gilmore et al. (2001), Bharati & Chaudhury (2015)
Small scale	Nooteboom (1994), Masurel (2004), Lukács (2005), Bharati & Chaudhury (2015)
Limited cash and short term focused	Spence (1999), Masurel (2004), Bharati & Chaudhury (2015)
Informality	Spence (1999), Masurel (2004), Bharati & Chaudhury (2015)
Age effect	Storey et al. (1987), Bharati & Chaudhury (2015)
Diversity	Nooteboom (1994), Bharati & Chaudhury (2015)
Multitasking	Spence (1999), Bharati & Chaudhury (2015)
High probability of family business	Storey et al. (1987), Masurel (2004)
Local focus	Masurel (2004), Bharati & Chaudhury (2015)
Complex performance measurement	Masurel (2004)
Low risk propensity	Bharati & Chaudhury (2015)

(1) The most quoted characteristic is highest in order
(2) The most recent research (year of publishing) is lowest in order

2.1.3 Role of SMEs

SMEs are the backbone of Europe's economy. They represent 99.8% of all businesses in the EU. Over the past decade, SMEs provided two-thirds of the total private sector employment in the EU, and they have created around 85% of new jobs. The EC considers SMEs as key to ensuring economic growth, innovation, job creation, and social integration in the EU (European Commission, 2015). Audretsch (2002) emphasizes on SMEs being the driving engine of growth, job creation, and competitiveness in global markets. The author finds that the greatest contribution to economics efficiency by SMEs is dynamic and evolutionary in nature: "small enterprises serve as agents of change" (Audretsch, 2002). SMEs change public policies towards a good economy for job creation, start-ups, knowledge spill overs and technological change.

In the Netherlands in the year 2014, SMEs are economically important representing a proportion of 99.8% of an estimated total of 803,522 enterprises defined as SMEs, providing roughly 3.5 million jobs and accounting for a total value of €189 billion. Micro sized enterprises account 93.6%, small sized enterprises account for 5.1%, and medium sized enterprises account for 1.0% of total enterprises in the Netherlands (European Commission SBA Fact Sheet, 2015).

The Global, European, and the Dutch statistical facts show significant evidence stating SMEs are crucial for the performance of the economy, on the country -and continent base. This is also emphasized by the authors Smallbone & Wyer (2000), stating SMEs have a dominant role, and contribute to the economic development, within national and local economies.

2.1.4 Strengths and weaknesses of SMEs

SMEs contain a number of strengths and weaknesses as opposed to large enterprises. The earlier mentioned core characteristics of Nooteboom (1994) are related to either strengths or weaknesses. The author denominates SMEs' strengths as: motivated management/commitment, motivated labour, no bureaucracy, low costs and little distortion of internal communication, capacity for customization, unique or scarce competencies, and originality of initiative.

Weaknesses of SMEs are denoted by Nooteboom (1994) as: unopposed misapprehensions, limited capacity for absorption of new knowledge/technology, technical myopia, little spread of risk, diseconomies of scale, lack of functional expertise, ad hoc management/short term perspective, vulnerability, limited career opportunities, and lack of means for growth.

Bharati & Chaudhury (2015) also link characteristics to strengths and weaknesses. The authors mention SMEs suffering from small economies of scale, which negatively influences their ability to grow, constrains business activities as a consequence of low resources. They have limited marketing and buying powers and enjoy limited autonomy in their decisions. Also SMEs face high unit costs because they cannot buy and sell in large quantities. SMEs are almost always behind the curve in adopting new businesses and manufacturing technologies, compared to large firms. The

characteristic of low cash flows is also denoted as a weakness due to short-term focus and 'surviving view' (Bharati & Chaudhury, 2015).

Strengths and weaknesses of SMEs in terms of innovation and exporting have also been studied. Typically, smaller firms are said to have advantages in terms of rapid decision-making, willingness to take risks and flexibility in responding to new market opportunities (Love & Roper, 2015). The same authors find that larger firms have advantages due to their scale and the availability of specialist resources. This suggests that 'the relative strengths of small firms are mostly behavioural. The authors find the following characteristics of behavioural strengths: "being entrepreneurial dynamism, flexibility, efficiency, proximity to the market, and motivation" (Love & Roper, 2015).

The most important challenges for SMEs are interacting with stakeholders, their own employees, government regulation, innovation and future owner needs (Everet & Watson, 1998). If an M&A project can overcome these challenges, then M&As would produce a net benefit to SMEs. M&As, therefore, can provide greater strength to the SMEs to stand on their own in the market (Yasumaru, 2009).

2.1.5 Conclusion

In order to answer the first sub-question, this chapter discusses and reviews leading academic literature on the core concepts of SMEs including their definition, both quantitative and qualitative, their economic role in society, and their strengths and weaknesses. The first sub-question belonging to this part of the chapter is: *How are SMEs defined and what is their role in the Dutch society?*

As this part of the chapter describes, SMEs significantly differ from large enterprises and they have a very important role in society. The EC defined SMEs according to a quantitative definition by fulfilling three criteria. These criteria are staff headcount, turnover, and total assets. It is compulsory to meet the staff headcount threshold, and when a SME does fulfil this threshold, at least one of the conditions, the turnover or the asset criterion, has to be satisfied. Table 1 provides an overview of the definition of SME by the EC. This quantitative definition will be used in the following chapters in order to test the formed hypothesis of chapter 3. However, to give a complete overview of how SMEs are defined, the qualitative characteristics, defined by earlier research, are also reviewed. An overview of these characteristics can be found in table 2.

The European and the Dutch statistical facts show significant evidence stating SMEs are crucial for the performance of the Dutch economy, which emphasizes the role of SMEs in the Dutch society.

2.2 M&As

This part of the literature review discusses and reviews leading academic literature on the concepts of M&As. The first part contains an introduction to, and the definition of an M&A. The second part provides the stages of an M&A, indicating which stage(s) is of importance to this research, followed by the third part, which describes different types of an M&A. The fourth part will contain information containing the factors for successful M&As, followed by factors for failure of M&As are discussed. Indicating which key factors of M&A projects contribute to either the success or failure of M&A projects is of relevance for this research due to the focus of this thesis, being on specific drivers for M&A activity. As, later on, in this literature review is explained, the drivers for M&A activity can be separated into value increasing drivers and value decreasing drivers, which on their turn lead to either M&A success or failure. The information is concluded in the sixth part, where the answer on the second sub question is provided.

2.2.1 Introduction to M&A

In existing literature the concept of M&A is often used as a general term to refer to the consolidation of enterprises. It is often used interchangeable, although a merger and an acquisition have distinct differences (Epstein, 2004). A merger is a combination of two enterprises, integrating their operations on a relatively equal basis, to form a new enterprise. Subsequently, an acquisition is the purchase of one enterprise, by passing of ownership of stock or assets, by another in which no new enterprise is formed. The acquiring enterprise is referred to as the buyer or acquirer, and the acquired enterprise is referred to as the target (Epstein, 2004). Nevertheless, literature hardly makes any difference between a merger and an acquisition. Reason for this is in practice there is no precise match between two enterprises (a merger). Meaning actually every merger can be classified as an acquisition. There are, according to Cartwright & Cooper (2012), no possible mergers, and mergers and acquisitions should be seen as one big whole. Schuler & Jackson (2001) agree with this position by arguing that M&As belong to the same degree of cooperation. This thesis is focused on acquisitions and because of the research explained above, focused on drivers of the buyer of the acquisition. This thesis includes both mergers and acquisitions when referring to M&A.

The topic M&A has been a popular academic research topic within finance, business, and economics for the past forty years. Notable contributions to literature have been made. Research of Haleblian et al. (2009) is focused on quantitative M&A research in the period 1992-2009 in the accounting, economics, finance, management, and sociology literatures. Their initial findings included 167 empirical articles. In these articles, initial research is mostly concentrated on finance, where research is primarily focused on the issue of whether M&As are wealth creating or wealth reducing events for shareholders. Typical findings from these earlier studies suggested that M&A projects did not enhance acquiring enterprise value, as measured by either short-term or long-term performance

measures. In recent years however, research into the human and psychological aspects of M&As have increased in prominence (Cartwright & Schoenberg, 2006).

Enterprises engage in M&A activity for various reasons. They are often motivated by a desire to achieve revenue and profit growth through market expansion or by adding new product lines, with cost efficiencies being a secondary agenda (Rahman & Lambkin, 2015). Porter (1996) emphasizes mainly on value creation, being the most frequently used motivation. Value creation can be defined as the added value due to the acquisition. Thus the combined value of the both enterprises, who are engaged in the M&A project, where the amount paid for the target enterprise, is expected to be lower than the expected potential. This thesis argues with research of Rahman & Lambkin (2015) and Porter (1996) by stating that cost efficiencies are not on the secondary agenda as a motivation for M&A projects. Cost efficiencies/synergies are the first reason for enterprises to engage in M&A activity due to managers pursuing lower costs in order to increase revenues. The value creation by M&A, as opposed to organic growth strategies, could be realized by the organizational structure of the target, which is already in place (Huyghebaert & Luypaert, 2010).

2.2.2 Stages of M&A process

When enterprises engage in M&A projects, they do not only merge or acquire the target their buildings, plants, and equipment, they also merge or acquire their individual structures, people, policies, and cultures. This requires the collision of organizational structures and policies, and will consist of multiple M&A stages (Appelbaum et al., 2000). The different phases of an M&A transaction consists of a pre-M&A phase, an M&A transaction phase, and a post-M&A phase (Kummer & Steger, 2008).

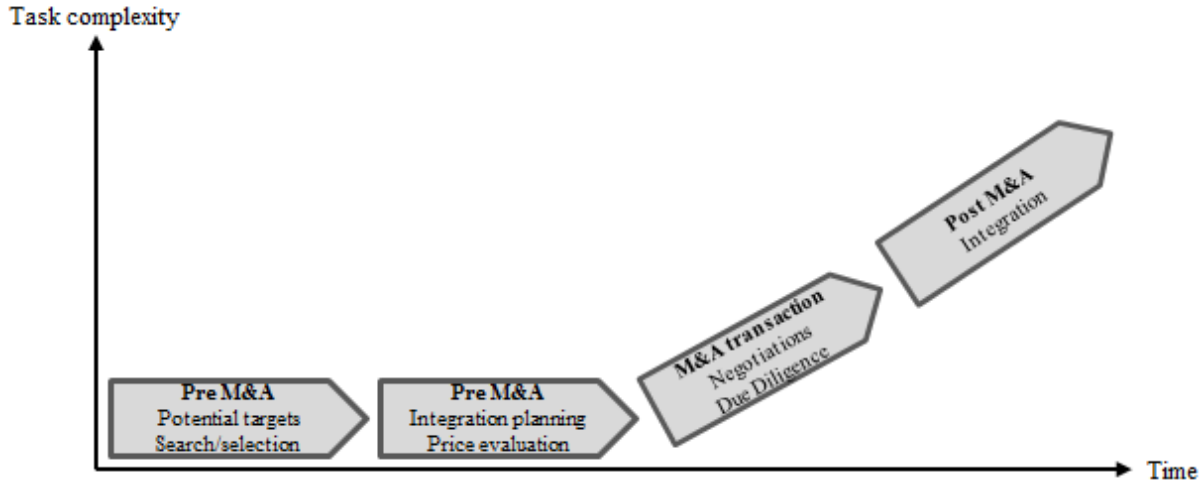
The pre-M&A phase starts once the decision to engage in an M&A project has been made, but the public announcement and all legal issues have not yet taken place. This stage is purely a preparatory stage where the enterprise searches for potential targets for the acquisition or merger (Appelbaum et al., 2000). This first stage, the search for potential targets, is considered to be relatively easy and is a necessary step, but it is not sufficient to make the entire M&A transaction a success (Kummer & Steger, 2008). According to Appelbaum et al. (2000) the most important step in the pre-M&A phase is the decision of which model of organizational culture has to be used. When the search and selection for potential targets is completed, the integration planning and price evaluation stage within the pre-M&A phase will be in effect. During this phase preparations for the M&A transaction are made. The pre-M&A phase is the most important phase in this thesis, because this research is focused on the drivers of shareholders and managers to engage in M&A activity.

After completion of the pre-M&A phase, it evolves into the M&A transaction phase. This stage contains negotiations between the buyer and target enterprise about the details including the offer price, the financials, and the non-financials of the possible deal. Moreover, a due diligence is applied in order to fully determine the deal criteria (Kummer & Steger, 2008). Due diligence plays a

critical role in the M&A process and is assumed to be objective and neutral in approach. It is an independent examination of the acquisition target. In particular, it focuses upon financials, tax matters, asset valuation, operations, in the valuation of a business, and providing assurances to the lenders and advisors in the transaction as well as the acquirer's management team (Angwin, 2001). This phase is also of importance to this thesis as there could be differences between large enterprises and SMEs in the integration of the due diligence.

When the due diligence is completed the M&A process continues to the post-M&A phase, where an agreement has been made between the involved parties. This stage will contain the integration and implementation of the M&A deal. This is considered to be the most difficult and critical part of the M&A process, due to the process of change. Employees often need five to seven years before they can fully identify themselves with the new enterprise (Kummer & Steger, 2008). The post-M&A phase is considered the most critical phase in the M&A process, as it is where value is created (Gomes et al., 2013). The authors Gomes et al. (2013) identify and discuss different success factors associated with the post M&A-phase. Figure 1 provides an overview of the different M&A stages.

Figure 1: *M&A stages (Appelbuam et al., 2000; Kummer & Steger, 2008; and Gomes et al., 2013)*



A lot of research studies the different phases of M&A and because of the enormous and growing amount of research and literature concerning the phases of M&As, it is hard structure literature and to point out what research is of relevance. Bauer & Matzler (2014) turn to four schools of thought, which reduce the complexity of the research field and have become well established. The most important stream in literature is the financial economic school of thought. This school of thought analyses the performance and wealth effects of M&As with stock analyses and market-based measures during all the M&A phases. Besides the financial economic school of thought, the strategic management school of thought studies the strategic fit, which consists of the effect of re-M&A relatedness, perceived similarity, or complementarity on performance during the pre-M&A phase.

Thirdly, research of the organization behaviour school investigates the cultural fit, by studying the effects of transactions on organizations, organizational culture, and individuals. Both the impact of cultural distance on pre-M&A -and post-M&A successes are analysed. Lastly, with the process school of thought, which has derived from the strategic management and the organizational behaviour school, M&A performance is fostered by the M&A process. An effective and efficient integration process is decisive for the post-M&A integration phase and, therefore, for the success of a transaction (Cartwright & Schoenberg, 2006; Bauer & Matzler, 2014).

2.2.3 Types of M&A

Existing literature describes different types of M&A. Research by Walsh (1988) for example identifies five different types of M&As. These types are horizontal, vertical, product extension, market extension, and unrelated M&As. Another research on the topic is that of Walter (1990). The author differentiates four general types of M&A, including vertical, horizontal, concentric, and conglomerate. Table 3 provides an overview of the combination of the different categories and their related description. The difference between research by Walsh (1988) and Walter (1990) is the 'concentric' category defined by Walter (1990). Concentric refers to M&As between two enterprises with highly similar production or distributional technologies. This is a combination of Walsh's (1988) product extension and conglomerate M&As.

Wheelen & Hunger (2001) define concentration and diversification strategies in the field of growth by M&As. Concentration strategy consists of the vertical and horizontal strategies of M&A, and the diversification strategy consists of product extension, market extension, and conglomerate strategies of M&A. These categories are important due to the fact that they are correlated to the drivers for M&A activity, representing a strategic objective of the acquiring enterprise.

Table 3: *Combined definitions of research by Walsh (1988), and Walter (1990)*

Category	**Description**
Vertical	M&A in which a buyer-seller relationship exist or could exist between the two enterprises (Walsh 1988; Walter 1990)
Horizontal	M&A between enterprises with identical, or closely related, products operating in the same or different markets (Walsh 1988; Walter 1990)
Product extension	Involved enterprises are functionally related in production and/or distribution but sell products that do not compete directly with one another (Walsh 1988)
Market extension	Involved enterprises manufacture the same products, but sell them in different geographic markets (Walsh 1988)
Conglomerate/ Unrelated	M&A between two enterprises that have no buyer-seller, technical and distributional relationship, and do not deal with identical products (Walsh 1988; Walter 1990)

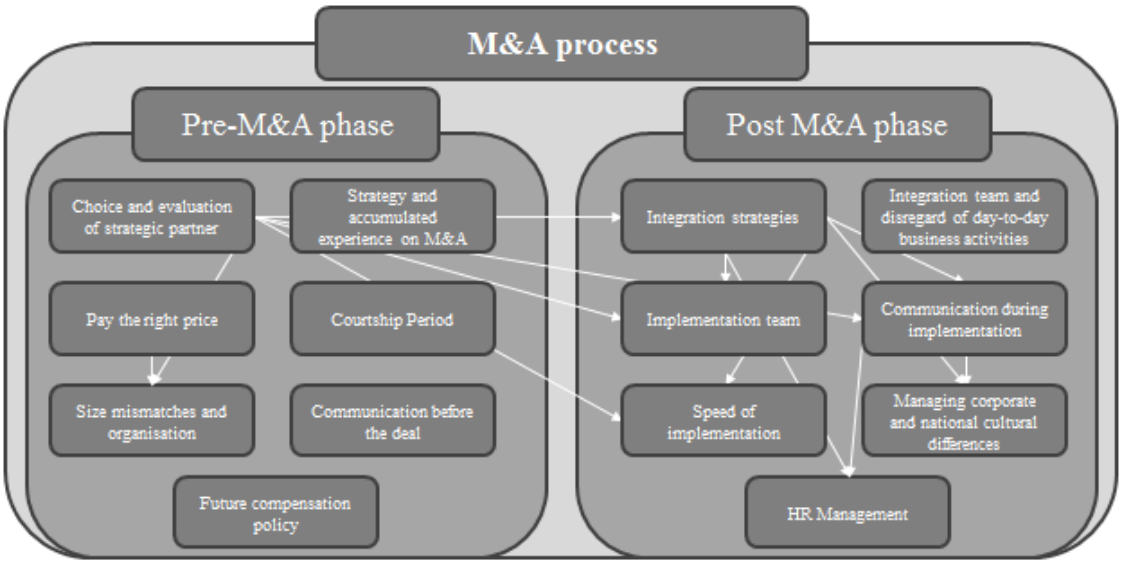
The category 'concentric' of Walter (1990) is a combination of Walsh's, (1988) 'product extension' and 'conglomerate'

2.2.4 Success factors of M&A

The reports from both financial analysts and the media are that most M&A projects fail. Various studies have confirmed these results. Although there are multiple explanations for failure, M&A projects are not always doomed to fail due to the existence of different success factors of M&A (Epstein, 2005). These factors may include financial indicators as well as qualitative objectives such as synergy and image improvement. By using key success factors as the measure of M&A performance, managers can get a better idea of the benefits attained from the merger or acquisition (Brouthers et al., 1998). The same authors recommend key success factors as the right measure of performance. Epstein (2005) defines seven determinants of M&A success, being identified as strategic vision, strategic fit, deal structure, due diligence, pre-merger planning, post-merger integration, and external environment. These success factors are partly linked to the earlier defined stages of M&A by Kummer & Steger (2008). Another research, which contributes to topic of success factors of M&A, is research of Beitel et al. (2004). The authors suggest that product focus of the transaction, geographic focus, size of the enterprise, prior experience with M&A, and the method of payment, are of significant value for M&A success.

The above mentioned research lacks the interrelationship between the pre-M&A phase and the post-M&A phase, and according to research of Gomes et al. (2013), very few researchers have a thorough understanding of the variables involved in the M&A process and their complex interrelationships. The authors propose a model that has attempted to identify the effect on performance across M&A phases, and define a distinction between pre-M&A critical success factors and post-M&A success factors. The authors define the pre-M&A phase critical success factors as: choice and evaluation of the strategic partner, pay the right price, size mismatches and organization, overall strategy and accumulated experience on M&A, courtship, communication before the deal, and future compensation policy. The post-M&A phase critical success factors are: integration strategies, post-acquisition leadership, speed of implementation, post-merger integration team and disregard of day-to-day business activities, communication during implementation, and managing corporate and national cultural differences. A detailed description of these critical success factors is in the research paper of Gomes et al. (2013). An overview and summary is given in figure 2.

Figure 2: *Summary of pre -and post-M&A phase critical factors and their interrelationships, Gomes et al. (2013)*



2.2.5 Failure factors of M&A

Earlier studies have also focused upon specific factors and determinants for M&A failure. According to Cartwright & Schoenberg (2006) there are two possible determinants for disturbing lack of improvement in M&A performance over the years. Firstly, executives are undertaking M&A projects driven by non-value maximizing motives. Seth et al. (2000) support this reasoning and provide evidence of the hubris theory. The authors investigated US cross-border M&As and found that 26% of these cross-border M&As were instigated by managers for their own utility rather than shareholder interests. Marks & Mirvis (2011) further support the theory of executives making non-value maximizing choices. According to the authors, factors contributing to M&A poor performance are paying the wrong rice, buying the wrong company, or making the deal at the wrong time. Non-value maximizing motives exist in both the pre-M&A phase and the post M&A phase, and are possibly the result of CEO's power and bonus size, which positively influence M&A failure rates (Grinstein & Hribar, 2004).

The second possibility is that the existing research to date is incomplete in some way. This statement is supported by research of King et al. (2004), they conclude that post-M&A performance is moderated by variables unspecified in existing research. They suggest changes to both M&A theory and research methods may be needed. M&A activity would have improved drastically as a result of defining clear success factors. In addition, the reasons for M&A failures are not very clear (Kummer & Steger, 2008). Although the reasons for M&A failures are not very clear, Kummer & Steger (2008) define unrealistic expectations, overconfidence, promoters and external advice, distrust, and group dynamics, as determinants for M&A failure.

Enterprises should pay attention to people issues surrounding M&A projects. Executives should take a reality test concerning their expectations and not be carried away by the dynamics of the

M&A situation. They should also create transparency, internally and externally, by communicating expectations and influencing factors (Marks & Mirvis, 2011).

2.2.6 Conclusion

The literature review of M&A discusses the M&A concept, its stages, types, successes, and failures. The sub question that belongs to this chapter is: *What are the critical factors in each M&A phase, and how does it impact the outcome and performance of M&A activity?*

In order to answer the sub-question an overview on current state of literature is given. M&A has been a popular academic research topic within finance, business, and economics for the past forty years. Initial research is mostly concentrated on finance, however research into the human and psychological aspects of M&A has increased in prominence.

The most frequently motivation for M&A activity is a desire to achieve revenue and profit growth through cost efficiencies.

For more detailed information regarding M&A activity, the different stages are defined. The different phases of an M&A transaction consists of the pre-M&A, the M&A transaction, and the post-M&A phase. Due to the complex structure of literature on M&A, four schools of thought (research) have been provided, which are the financial economic school, the strategic management school, the organization behaviour school, and the process school. An overview of the different types of M&A is given in table 3.

The critical factors are split up into success factors and into factors of failure. The most recent and complete study on success factors, which have a positive relation to M&A performance, is from Gomes et al. (2013). An overview is given in figure 2.

In addition, there are two possible determinants for disturbing lack of improvement in M&A performance over the years, the first determinant are executives, which are undertaking M&A projects driven by non-value maximizing motives, or, the second determinant, existing research to date is incomplete in some way.

Concluding, there are several critical factors in the pre- and post-M&A phase, both positive and negative of influence on M&A performance.

2.3 Drivers of large enterprises for M&A activity

A primary line of academic research centres on why firms engage in M&A activity and propose different M&A drivers. As the pre-M&A phase describes, an M&A project is not an unplanned process. Moreover, it is a fact that deciding to engage in an M&A project is not a spontaneous decision, but actually a number of incentives drives the decision to engage in M&A activity (Bedier, 2015). Most observers agree that M&A activity is driven by a complex pattern of drivers, and that no single approach can give full explanation (Trautwein, 1990). This part of the thesis considers various theories of drivers of large enterprises to engage in M&A activity, provided by findings of earlier research. Distinction is made between *value increasing drivers,* described in the first part, value decreasing *self-interest drivers*, described in the second part, *external environmental drivers,* described in the third part, and *firm characteristic drivers,* described in the fourth part. The fifth part concludes this part of the chapter.

By using key success factors as the measure of merger performance, managers can get a better idea of the benefits attained from the merger, not just a measure of whether shareholder value has changed (Brouthers et al., 1998). The fundament for this research lies in the research of Brouthers et al. (1998) and Haleblian et al. (2009). As these authors are one of the few authors who propose sub-categories for possible drivers for M&A behaviour.

Brouthers et al. (1998) propose three generally accepted categories of merger motives, which are *strategic*, *economic*, and *personal motives*. More specifically, the authors identify 17 motives and test these on their importance and whether the goals set by management are achieved. The data utilized in this research comes from a survey of the merger activities of large, publicly traded Dutch firms for 1994. In their studies they find five most important motives, which, interestingly, also are find to be the motives most likely to realize their potential. These motives are 'pursuing market power', 'increasing profitability', 'marketing economies of scale', 'creation of shareholder value', and 'increasing sales'. Haleblian et al. (2009) develop a framework to organize and review recent empirical findings in which interest in acquisition behaviour is high. The authors propose four categories in which the drivers can be categorized, these are: *value creation*, *managerial self-interest* (value destruction), *environmental factors*, and *firm characteristics*.

When incorporating both studies, some of the above mentioned concepts complement each other. Therefore, this thesis incorporates and mergers the above mentioned concepts into a new, moderated categorization of drivers for M&As. The identified categories contain multiple drivers per category. A distinction is made between the following drivers: *value increasing drivers, self-interest drivers* (value decreasing drivers)*, external environmental drivers,* and *firm characteristic drivers.*

2.3.1 Value increasing drivers

The primary motive for enterprises to engage in M&A projects is because M&As generate 'synergies' between the acquirer and the target. By integration of the two companies, they realize a competitive

advantage, and in turn, increase the value of the firm (Hitt et al., 2001). Within the value increasing drivers, distinction is made between: the efficiency theory, market power, and the theory of corporate control.

The *efficiency theory* suggests that M&As only occur when they are expected to generate enough realizable synergies to make the deal beneficial to both enterprises. Research of Trautwein (1990) elaborates on the efficiency theory and classifies three types of synergies. These types of synergies are financial synergies, managerial synergies, and operational synergies. Financial synergies are recognized when an M&A deal results in a reduction of cost of capital, a shared know-how and increase in tangible resources. An increase in size of the company results in an increase of bargaining power with banks and investors, which in turn provides more and cheaper external sources of financing. This results in a reduction of the cost of capital. Managerial synergies are realized when the bidder's management abilities increases, such as planning and target performance measurement, due to the target's performance combined in the new management (Trautwein, 1990). Operating synergies are classified as synergies that are realized by reducing production and transaction costs (Trautwein, 1990; Seth, 1990). Actually, most of the more recent literature concludes that operating synergies are the more significant source of gain. Mukherjee et al. (2004) find that 90% of managers identify operative motives as a reason to merge, and Devos et al. (2008) suggest that, of a total 10.3% synergy gain, some 8.3% arise through operative synergies.

Following research of Chatterjee (1986), value creation by synergy creation (due to M&A activity), is distinguished into operative synergies, achieved through economies of scale and scope, and collusive synergies resultant from increased market power and an improved ability to extract consumer surplus (Chatterjee, 1986; Weitzel & McCarthy, 2011). The author Seth (1990) contributes to this finding by stating that synergy creation actually relates to enterprises creating more economies of scale and scope. Creating more economies of scale is defined by the author as improving and creating advantages in activities like purchasing power, distribution and services network, inventory management, advertising, and R&D. An improvement in economies of scope occurs when the total cost of producing two types of outputs together are less than the total cost of producing each type of output separately, implying that there are shareable inputs and that the products share similar characteristics (Seth, 1990).

Market power can be considered as an attempt of an enterprise to appropriate more value from markets and customers. Market power offers the enterprise significant positive benefits with the idea that having fewer enterprises in an industry increases enterprise-level pricing power (Haleblian et al., 2009). Firms with greater market power charge higher prices and earn greater margins through the appropriation of consumer surplus (Weitzel & McCarthy, 2011). Increasing market share, accelerating growth, entering new markets, providing new products/services, reaction to competition, and broadening customer base for existing services/products, are examples of motives for market power (Kreitl & Oberndorfer, 2004). Market power is also said to raise the entry-bar for potential future

participants of the market in which the enterprise operates, which can again be of value to the enterprise, and offer another long-term source of gain (Gugler et al., 2003; Motta, 2004).

Besides the efficiency theory and the theory of market power, the theory of corporate control provides a third theory as a value-increasing driver for M&A activity (Weitzel & McCarthy, 2011). The theory of corporate control describes the situation of the presence of another enterprise or management willing to acquire an underperforming enterprise. This situation exists because managers who have failed to capitalize on the opportunities to create synergies, and thus to improve the value of the enterprise, will always be removed from their position (Weston et al., 2004). Managers who offer the highest value to the enterprise and shareholders will be selected to have the right to manage the enterprise until they themselves are replaced by another management which in their turn can create even higher enterprise value. Thus, if managers do not pursue and strive for maximum profit and value, they will not survive in the long run. Even if the competitive forces on their product and input market fails to eliminate them (Jensen & Ruback, 1983).

According to the authors Weitzel & McCarthy (2011), from the perspective of the acquiring enterprise, the *theory of corporate control* is partially based on the efficiency theory, although the authors define two important differences. The first difference is the theory does not assume the existence of synergies between the assets of both enterprises, but rather between the managerial capabilities of the acquirer and the target's assets. Hence, corporate control predicts managerial efficiencies from the re-allocation of under-utilized assets. The second difference is that the theory implies that the management of the target is likely be defensive to any M&A attempts, due to the inefficiency of the management, being the main obstacle to an improve utilization of assets. "Typical acquirers are more efficient enterprises with better growth prospects and superior performance, or private investors who bring in a more competent management" (Weitzel & McCarthy, 2011).

2.3.2 Value decreasing, self-interested drivers

As the research of value increasing drivers for M&A behaviour shows in the previous part, M&A projects are undertaken to maximize enterprise value and thus shareholder value. However a substantial amount of research makes the opposing assumption, which assumes that M&A activity destroys shareholder value as managers attempt to maximize their own self-interest (Haleblian et al., 2009). Jensen (1986) further finds self-interested drivers for M&A activity evolve around the managers' incentive to increase the enterprise beyond its optimal size for personal gains rather than the enterprise itself. Previous research regarding M&A activity, suggest that a substantial amount of M&As do not create enterprise value. Interestingly, past research declares the failure rates of M&A somewhere between 70% and 90% (Christensen et al., 2011). A number of value destroying theories have been provided as an explanation for M&A behaviour. These are compensation, managerial hubris, target defence tactics, empire building, and managerial discretion.

A number of studies involved explaining the important links between *managerial compensation* and ownership in combination with M&A behaviour. For example, research of Agrawal & Walkling (1994) finds that industries with higher managerial compensation generally exhibit greater M&A activity. The agency theory states that compensation contracts should be designed to reduce managerial opportunism and align managers' and shareholders' interests (Haleblian et al., 2009). However, an increasing body of recent evidence suggests that managers' desire for increased compensation creates strong, self-interested motivations to engage in M&A projects. Furthermore, the compensation of managers of enterprises often increase post-acquisition, irrespective of acquisition performance, thus providing a significant motivation for why management may decide to acquire a target enterprise (Harford & Li, 2007).

In addition to the link between compensation of managers and M&A activity, research shows that managerial confidence is also found to be a significant motivation for M&A activity. Roll (1986) studies the effects of managerial overconfidence in the context of M&As, and proposed the theory of *managerial hubris*. This theory suggests that managers may have good intention in increasing the enterprise value but, being overconfident, they overestimate their abilities to create synergies. In line with this argument, overconfidence increases the probability of an increased premium, which is inherent in overpaying in the acquisition of the target firm (Hayward & Hambrick, 1997). Malmendier & Tate (2008) further elaborate on this theory and find that overconfident managers overestimate their ability to generate returns and as a result overpay for target enterprises in M&A deals, which results in value destroying M&A projects. Besides their research of 2008, in their research of 2005, the authors find that overconfident managers, who voluntarily retain in-the-money stock options in their own enterprises, more frequently engage in less profitable M&A projects (Malmendier & Tate, 2005). Georgen & Renneboog (2004) studied the theory in the EU context, and concluded that one third of all M&A projects in the 1990s suffered from managerial hubris, indicating its importance as a driver for M&A activity.

Besides compensation and managerial hubris*, target defence tactics* are created to enhance managerial self-interest at the expense of shareholder wealth (Haleblian et al., 2009). Jensen (2005) finds that managers of the acquiring enterprises pay more attention to the transaction when they themselves are financially concerned with the M&A project, which is also referred to as the theory of self-serving M&A activity. Further, the theory of managerial entrenchment of Shleifer and Vishny (1989) claims that unsuccessful M&A projects occur because managers primarily undertake investments that minimize the risk of their replacement. This theory suggests that managers pursue projects not in an effort to maximize enterprise value, but in an effort to entrench themselves by increasing their individual value to the firm. Managers who entrench themselves will make managers-specific investments that make it more costly for shareholders to replace them. Because of this the value of the enterprise is reduced due to free resources being invested in manager-specific assets instead in a shareholder and enterprise value increasing alternative. Amihud & Lev (1981) emphasize

on this theory and suggest that managers pursue diversifying M&A projects in order to decrease earnings volatility, which, in turn, enhance corporate survival and protects their positions. According to Malmendier & Tate (2008), these theories of actions of managers, such as diversifying personal human capital and high ownership concentration, are part of defence tactics drivers.

Managers do not entrench themselves only for job security, but also because entrenched managers may be able to extract more wealth, power, reputation, and fame (Weitzel & McCarthy, 2011). While this theory of entrenchment describes the actions of managers to position themselves to achieve these objectives, the theory of *empire building* explains managers are explicitly motivated to invest in the growth of their enterprise's revenues, subject to a minimum profit requirement (Marris, 1963). In various cases M&A projects are planned and executed by managers who rather focus on maximizing their own utility instead of maximizing the value of the firm. Jensen (1986) also finds evidence indicating M&A activity evolves around the managers' incentive to increase the enterprise beyond its optimal size, for personal gains rather than the enterprise itself.

The theory of *managerial discretion* is built on the situation when booming financial markets result in excessive funds at the discretion of management. The presence of excess liquidity, or free cash flow (FCF), will in turn be invested by self-interested managers into value destroying M&A activity (Jensen, 1986). According to Martynova & Renneboog (2008), excess FCFs make it possible for managers to engage in poor M&A projects when they have run out of good ones. The authors find that indeed several empirical studies suggest that acquiring firms with excess FCFs tend to destroy value by overbidding (Martynova & Renneboog 2008; Harford, 1999; Lang et al., 1991). These authors also provide evidence that the availability of FCFs is closely related to the environmental macro-economic situation, which is described in the next part with environmental uncertainty.

According to Weitzel & McCarthy (2011), the other stakeholders in the enterprise will be more likely to give management the benefit of the doubt in such situation, and to approve M&A plans on the basis of fuzzy and subjective concepts such as managerial 'instincts', 'gut feelings, and 'intuition', based on high past and current FCFs (Weitzel & McCarthy, 2011).

2.3.3 External environmental drivers

M&A activity also occurs due to drivers caused by the external environment surrounding enterprises. Research has focused on whether the fit between environment and firm strategy drives firms into M&A behaviour. The drivers that are recognized in the category external environment are environmental uncertainty, (de)regulation, imitation, and differences in valuation due currency movements (Haleblian et al., 2009; Erel et al., 2012).

Bergh & Lawless (1998) studied the possible fit between the external environment and M&A behaviour. The authors find that highly diversified enterprises are more likely to pursue M&A activity in decreasing *environmental uncertainty*, whereas the opposite occurs in less diversified enterprises. Schleifer & Vishny (2003), however, find environmental and economic uncertainty leads to a

decrease in the likelihood of M&A activity, as a result of decreasing confidence in the economy. Thornton (2001) demonstrates that the likelihood of M&A activity increases as the enterprise fails to change and shift its strategy with the environmental changes.

Trautwein (1990) elaborates on the disturbance theory to explain that M&A waves, related to increasing -and decreasing M&A activity, are subject to economic disturbance and environmental uncertainty. In the macro-economic situation of increasing stock prices, caused by economic prosperity, the likelihood of M&A activity increases. However, when environmental uncertainty occurs in economic downturn, stock prices fall and this leads to a decrease in the availability of financial funds, which in turn decreases the likelihood M&A activity.

Arguably the economic environment cannot be applied as an institutional explanation for M&A activity, for the reason that it provides a macro level explanation of M&A waves, rather than the individual decision making process of enterprises to acquire (Trautwein, 1990).

External governance has also influence on M&A activity as an environmental factor. In studying external governance, regulatory actions on M&A behaviour are examined (Haleblian et al., 2009). Governmental regulation plays a significant role by fining enterprises that, by M&A activity, own a too large share of the total market. On the contrary, with governmental deregulation, entry barriers for new participants of the market are lowered, resulting in enterprises having to adapt to these changes through restructuring. Thus, increasing the likelihood of M&A activity and therefore being a significant determinant for M&A activity (Bedier, 2015). Schoenberg & Reeves (1999) study M&A activity during takeover waves and find that M&A activity is concentrated in certain industry sectors, where deregulation is the most important discriminator between these industries, with high and low M&A activity. Furthermore the authors state external changes to industry regulation may act as a greater trigger to industry restructuring than internal industry dynamics.

Moreover, M&A activity may occur due to *imitation*. Stearns and Allan (1996) focused their research on the M&A wave of the 1980s, and found that actors, who promoted M&A activity, initiated innovation that enabled them to execute M&A transactions, and as the actors became increasingly successful, others, in turn, imitated their innovations.

Besides the earlier mentioned environmental drivers for M&A, *differences in valuation due to currency movements,* appears to play a big role in the drivers for enterprises to engage in M&A activity (Erel et al., 2012). Differences in valuation can variate considerably over time for any pair of countries through fluctuation in exchange rates, stock market movements, and macro-economic changes. Differences in valuation causes for cross-border M&As due to the financial markets not being perfectly integrated across various countries (Monteiroet al., 2012). Currency movements determine the pattern of cross-border M&As. If the exchange rate of the acquirer appreciates, or the target's exchange rate depreciates, a possible M&A transaction becomes more likely, due to the M&A deal becoming more profitable for the acquirer. Information asymmetries exist among the enterprises acting in different currencies. The acquirer will utilize the opportunity that arises due to the exchange

rate difference. An introduction of a common currency, like the European Euro, reduces the information asymmetries among different countries, and therefore lowers the valuation differences (Erel et al., 2012). This also has a positive relation to M&As. Research of Coeurdacier et al. (2009) finds evidence for the positive relation between the introduction of the Euro and an increase of the number of cross-border M&A activity. With the removal of the exchange rate risk, information asymmetry is lowered and results in extra competitive pressure due to better price comparison. This, in turn, causes a decrease in the reservation price of the target and thus in a higher profitability of cross-border M&A activity.

2.3.4 Firm characteristic drivers

M&A activity may also derive through internal environmental factors, which can be defined as firm-characteristic factors of motivation for M&A activity. This category is differentiated into prior M&A experience, and network ties.

The link between, and influence of, *prior M&A experience* and M&A activity is also studied by different researchers. Due to the fact that M&As often occur multiple times in the history of an enterprise, researchers have the opportunity to assess whether performance improvements occurred across these M&A events. Enterprises that have prior experience in M&A activity, by a prior M&A deal, have a more increased likelihood to engage in another M&A project, particularly when this experience is rewarded (Hitt et al., 1998). Besides, Halebian et al. (2009) suggest that M&A experience of a particular type (e.g., horizontal, vertical or product extension) can increase the likelihood of repetitive M&A behaviour, using a similar type and decreasing the likelihood of a different type of M&A project. Further research of Peng & Fang (2010) argues that M&A experience positively influences firms to adopt M&A projects repeatedly and that board characteristics are irrelevant to this decision, emphasizing on the influence of experience, in general on M&A behaviour. Granovetter (1973) showed the importance of *network ties* as a driver for M&A behaviour. Managers who have a broad and diversified network have better excess to information, and this increases the likelihood for M&A activity. Furthermore, Haunschild & Beckman (1998) showed that the number of current M&As was positively related to the number of M&As completed by interlock partners. This relation is due to the managers imitating the M&A behaviour of enterprises, which they were tied to with their network. The valuation theory of Ravenscraft & Scherer (1989) further emphasizes on the relationship between network ties of management and M&A activity by providing evidence that managers, who have better excess to information concerning the target's value due to their networks, are have increased likelihood of engagement in M&A activity.

2.3.5 Conclusion

The previous part of this chapter discusses all the possible drivers for large enterprises to engage in M&A projects according to leading academic literature. The sub-question belonging to this chapter is: *What are the theories of drivers of large enterprises to engage in M&A activity?*

To answer this sub-question, this chapter cites and incorporates research of Brouthers et al. (1998) and Haleblian et al. (2009) for the fundament of drivers for M&A activity. After incorporating this research, a distinction is made between the following leading drivers: *value increasing drivers, self-interest drivers* (value decreasing drivers)*, external environmental drivers,* and *firm characteristic drivers.* In order to give a complete overview these drivers, including their sub-drivers, is given in table 4.

Table 4: *Overview of drivers to engage in M&A activity for large enterprises*

Outcome	**Benefits**	**M&A driver**	**Description**
Value increasing	Shareholders	Efficiency theory	Net gains through operational, financial and managerial synergies
		Market power	Appropriating more value from markets and customers
		Theory of corporate control	Net gains through managerial synergies
Value decreasing	Shareholder intended	Managerial discretion	Net losses due to valuation mistakes or excess FCF
		Managerial hubris	Net losses through managerial overconfidence, which increases the probability of overpaying
	Managers	Target defence tactics	Net losses because managers undertake M&A projects to reinforce job positions
		Empire building	Net losses because managers undertake M&A projects to increase firms size
		Compensation	Net losses through increased managerial compensation
Either value increasing or value decreasing	Shareholders and managers	Environmental uncertainty	M&A behaviour is subject to economic disturbance and environmental uncertainty
		Regulation	Governmental deregulatory actions trigger M&A behaviour
		Imitation	Managers imitation other, successful M&A deals
		Currency movements	If the exchange rate of the acquirer (target) appreciates (depreciates), a possible M&A transaction becomes more likely
		M&A experience	Prior experience in M&A activity increases likelihood of repetitive of M&A behaviour
		Network ties	Diversified managerial network creates an excess to information, and increases the likelihood M&A activity

3. Implementing theories of large enterprises to SMEs

This chapter implements all theories of drivers for M&A behaviour by large enterprises, to examine whether they are applicable to SMEs. The previous described theories of drivers for M&A activity are focused on, and evolved from, the analysis of relatively large-scale M&A deals by public acquires and little effort has been made in understanding the role of the drivers for M&A behaviour of SMEs. The main question of this thesis concerns the possible differences between SMEs and large enterprises. Therefore, by logical reasoning with the information of the literature review of chapter 2, the theories of drivers for M&A activity by large enterprises are reviewed by reasoning their applicability to SMEs, and are formed into hypotheses.

The first category of drivers, which is reviewed for applicability are the *value increasing drivers*. Both drivers are common and applicable for large enterprises and SMEs due to both types of enterprises searching for greater value. When evaluating literature, it seems that SMEs are more likely to create value when participating in M&A activity. Research of Moeller et al. (2004, 2005) and Weitzel & McCarhty (2011) indicates that M&A projects made by SMEs are typically profitable, whereas large enterprises engaged in large M&A projects often result in losses. Therefore it is assumed that SMEs have an increased likelihood of a successful M&A deal. Due to these facts, and because of the managers of SMEs in the Netherlands being aware of these facts, it is expected that managers of SMEs in the Netherlands indeed pursue external growth opportunities through M&A, and will engage in M&A activity with a higher intensity than large Dutch enterprises. This is a theory known by management of Dutch SMEs and therefore the value increasing theories are expected to have a higher impact on SMEs engaging in M&A activity than for large enterprises. Due to this theory, this thesis applies a proxy for value increasing drivers being the engagement rate of enterprises in M&A projects. This proxy is similar in research of Moeller et al. (2004) and Weitzel & McCarthy (2011). Formulating the first proposition/causality: M&As of SMEs are more profitable, resulting in a higher change of success, managers are aware of his fact, which results in SMEs pursuing more external growth through M&A behaviour, which in turn results in SMEs engaging in M&A activity with a higher extent than large enterprises. Therefore, value increasing drivers to engage in M&A activity have a higher impact on Dutch SMEs than on large Dutch enterprises. If the value increasing drivers of Dutch SMEs have more impact, Dutch SMEs who seek external growth, engage more in M&A projects than Dutch large enterprises. Thus, the following hypothesis is formulated:

Hypothesis 1: Dutch SMEs are more engaged in M&A projects than large Dutch enterprises.

The second category belonging to this research is the theory of *managerial self-interested drivers*. These drivers are expected to differ between SMEs and large enterprises. The mean reason is the presence and existence of agency costs in large enterprises. Agency costs are assumed to occur

less in SMEs due to managers often being the owner of the enterprise (literature review). Due to the owner being in control of the enterprise, some of the costs that arise from agency issues, which are characteristics of large enterprises, do not occur and do not exist among SMEs (Spence, 1999). Because of this, the self-interested drivers (defence tactics and empire building) will have low or no impact. Moeller et al. (2004) find that managers in SMEs are as likely to make the same rational mistakes as managers in larger enterprises. But due to the low agency costs, the interest of the managers is more closely aligned with the owners. Because of these characteristics, in combination with the transparency and information symmetries occurring in SMEs, managers of SMEs are more likely to withdraw from unsuccessful M&A deals. In other words, the self-interested drivers for M&A activity are not or less applicable for SMEs. Formulating the second proposition/causality: due to SMEs being owner-managed, agency costs occur less in SMEs, therefore interest of managers is more closely aligned with the owners, this in combination with transparency and information asymmetry within SMEs, SMEs are more likely to withdraw from unsuccessful M&A deals. Therefore, self-interested drivers to engage in M&A activity have less impact for Dutch SMEs than for large Dutch enterprises. If this proposition is true the withdraw rate from M&A projects of Dutch SMEs is higher than large Dutch enterprises. Thus, the following hypothesis is formulated: **Hypothesis 2: Dutch SMEs, who are involved in an M&A process, have a higher withdraw rate than large Dutch enterprises.**

The third category drivers are the e*xternal environmental drivers*. These drivers for M&A activity seem to have no significant difference between large enterprises and SMEs. Arguably the economic environment cannot be applied as an institutional explanation for M&A activity, for the reason that it provides a macro level explanation of M&A waves, rather than the individual decision making process of enterprises to acquire (Trautwein, 1990). One can argue that the reaction to economic uncertainty, imitation, regulation, and differences in valuation due currency movements, could be different between large enterprises and SMEs, but because of the time limitations these possible differences are not studied in this thesis. Because of this earlier research explaining external environmental drivers for M&A activity for both large enterprises and SMEs being irrelevant, no hypothesis is formed for possible differences.

The fourth category drivers are the *firm characteristic drivers.* These drivers may differ between SMEs and large enterprises. For large (public) enterprises financing is the cheapest when it comes from internal capital like FCF or retained earnings, because external capital like debt or equity is subject to adverse selection and transaction costs caused by the existence of asymmetric information between investors and managers (Wan & Yiu, 2009). According to Myers and Mailuf (1984), with external capital, debt is preferred over equity because debt is more cheaper as it one bank which has to be convinced when an investment opportunity arises, when in the case of equity a group

of shareholders (new equity) has to be convinced of the investment opportunity. The *pecking order theory* is suggested to form the order of financial capital by the same authors: first internal cash, then debt, then equity. According to Weitzel & McCarty (2011), for SME financing, the pecking order theory does not fully apply. The authors propose the following pecking order: internal cash, then equity, then debt. Equity is preferred, the authors argue, because SMEs buy smaller targets compared to large enterprises. Both the SME acquirer and target are often owner-managed as described with the characteristics in the literature review. Due to all negotiations and due diligence with the owner-managers of the acquirer and target, the information asymmetry will be reduced. Furthermore, Weitzel & McCarthy suggest that SMEs typically will have more concentrated large shareholders than large enterprises, which makes it simpler to advance and more simple to convince the target shareholders. Because of the high probability of these target shareholders also having a seat in the board, information asymmetry is reduced. Attracting debt by going to a bank remains a costly option due to fact that smaller enterprises are less transparent for banks, resulting in higher risk for banks and therefore higher interest. Berger & Udell (1998) provide evidence in favour of this theory by arguing that the limited access to financial resources of SMEs derives from "informational opacity". Due to SMEs not being publicly listed, the external suppliers of financial capital do not have full access to the activities and financials of SMEs (being less transparent), and therefore these external suppliers are more uncertain in the case of SMEs compared to large enterprises. This makes is more difficult for SMEs to extract and raise capital from financial institutions like banks.

Although Weitzel & McCarty (2011) state the pecking order theory does not apply to SMEs, according to this thesis, the pecking order theory does apply for Dutch SMEs. However, because of SMEs their characteristics, the relative costs and benefits of using debt and equity will differ to large enterprises. Internal cash used as means of payment is more likely in the scenario of SMEs because of their characteristics as they contain limited resources for the external financing of the M&A project (Weitzel & McCarty, 2011). Equity is third in line of the Pecking order when a SME is in need of finance because SME's shareholders typically possess illiquid shares due to the fact SMEs are often not publically listed. Weitzel & McCarthy (2011) argue that equity is preferred over debt. According to this thesis, this is the case when equity is defined as "own equity". If an enterprise achieves a certain net income, some of it is transferred to equity (retained earnings) and some of the amount is transferred as dividend to the shareholders/owners of the SME. When a SME is in need of finance, this "own equity" is transferred back. Therefore, according to this thesis, this own equity is seen as internal cash and therefore not seen as equity. Therefore SMEs are more likely to pay with internal cash instead of debt or equity. When an enterprise increases in size, the preference for internal cash decreases due to the other external finance options (both debt and equity) as described above by the authors Weitzel & McCarty (2011). Therefore, suggesting the following; the relation between increasing enterprise size and cash as means of payment for the transaction is negative, and the relation between increasing enterprise size and stock as means of payment is positive. The following

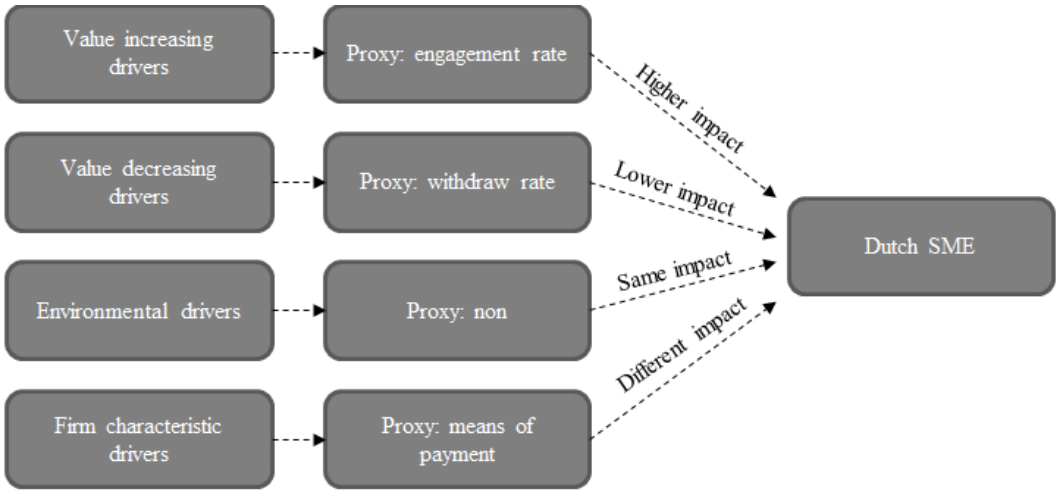
proposition is formulated: Firm characteristic drivers to engage in M&A activity differ between Dutch SMEs and Dutch large enterprises. Therefore, the following hypothesis is formulated: **Hypothesis 3: The relation between increasing enterprise size and cash (stock) as means of payment is negative (positive) for Dutch SMEs and Dutch large enterprises.**

2.4.1 Conclusion

The sub-question that belongs to this part of the chapter is: *How can the theory of drivers for M&A activity be applied to SMEs?* This sub-question is answered by analysing each of the four earlier formed drivers and by logical reasoning forming propositions and these propositions into hypotheses.
It is expected that the value increasing drivers have a higher impact on Dutch SMEs than on large Dutch enterprises, because M&As of SMEs are more profitable, resulting in a higher change of success, managers are aware of his fact, which results in SMEs pursuing more external growth through M&A behaviour, which in turn results in SMEs engaging in M&A activity with a higher extent than large enterprises. Research by Moeller et al. (2004, 2005) and Weitzel & McCarhty (2011) proves this theory. The second expectation is that self-interested drivers will have less impact on Dutch SMEs than on large Dutch enterprises because of the characteristics of SMEs, referring to the non-presence of agency costs and the transparency and information symmetries occurring in SMEs. SMEs are more likely to withdraw from unsuccessful M&A deals.

The environmental drivers are expected to do not significantly differ, therefore no hypothesis is formed. The firm characteristic drivers are expected to differ between Dutch SMEs and large Dutch enterprises due to the relation of increasing enterprise size and cash as means of payment being negative, and the relation of increasing enterprise size and stock as means of payment being positive.
A visual overview of the hypotheses is provided in figure 3 where the impact of M&A drivers is showed between SME and large enterprises.

Figure 3: *Visual overview of hypotheses; how M&A drivers impact Dutch SMEs in comparison with large Dutch enterprises*



4. Research design

This chapter contains the description of the data collection for the sample used in the empirical analysis to test if there is statistical significance among the different dependent variables in their relation to the independent variables and subsequently whether to accept or reject the formed hypotheses of chapter 3. The research model used in this thesis is based on earlier research by Moeller et al. (2004) and Weitzel & McCarthy (2011), because these authors are most closely with their research to the topic of this thesis, which includes the differences between the drivers for M&A activity by Dutch SMEs and large Dutch enterprises. The first part describes the sample and data collection by providing the choice of the conditions. This is followed by variable description, which describes the dependent variables, the independent variables, and the control variables, which are all applied in the empirical analysis. This part is followed by the methodology. In the methodology, the choice for the regression tests will be provided and they are linked to the hypotheses. Next, the models for regression, belonging to each hypothesis, are described. Important note; this research concerns Dutch SMEs and Dutch large enterprises. When referring to SMEs or large enterprises in the research design, this thesis refers to Dutch SMEs and Dutch large enterprises only if it is mentioned otherwise.

4.1 Data description

In order to test the earlier formed hypotheses concerning differences between SMEs and large enterprises in M&As, data is collected from the database Thomson One. Thomson One database contains data of all M&As around the globe and it is a popular database for research regarding the M&A topic. For the research of this thesis the data has to satisfy the following conditions: 1) All data selected are mergers and acquisitions, because the topic of this thesis concerns M&As. 2) Deals are announced between January the 1st 2005 and December the 31th 2015, this time frame is chosen because ten years is assumed to provide enough data for a big enough sample. Typically SMEs do not disclose information concerning their financials of their M&A projects, due to the fact that SMEs are not publicly quoted and are not obligated by the Dutch government (Litjens et al., 2012). Because it is not mandatory for SMEs to disclose information, SMEs are likely to report in the case of an M&A deal. Therefore, there will be a sample selection bias. 3) The deal is either completed or withdrawn. Pending and rumoured M&A deals are excluded. This condition is set because the research of this thesis is interested in these two types of M&As. In this case there is also a sample selection bias due to it is not mandatory for SMEs to disclose M&A deal information. Typically, only the successful deals will be reported. Therefore the deals are probably biased towards successfulness and thus completed deals are expected to be reported with a higher extent. 4) The acquirer is located in the Netherlands. Due to the scope of this research, being about the drivers of Dutch SMEs for M&A projects. 5) The following acquisitions techniques are excluded: recapitalization, self-tender, privatization, spinoff, and repurchase. These acquisitions techniques are not valued as M&A projects

according to this thesis, and do not concern this research, therefore they are excluded. 6) The M&As are conducted by strategically buyers, private equity (PE) firms are excluded. The transactions are only strategic buyers because this thesis concerns drivers of SMEs, being enterprises, no investors like PE. 7) The variables needed for the analyses, described in the next part, are not absent.

Following the data collection with these conditions, a number of 6394 M&A deals are the outcome for further analyses. The acquirers are classified according to the latest EC definition on SMEs. This definition is described in chapter 2.1, and it contains a clear overview in table 1. This thesis defines a SME according to the definition of the EC, because this definition, according to this thesis, is most applicable in this research. Another classification is of Moeller et al. (2004), who define SMEs according to enterprises whose capitalizations falls below the 25th percentile of the New York Stock Exchange enterprises of that year. However, this classification includes enterprises that are all listed to the stock exchange. The Dutch SME market consists of enterprises that are not listed to the stock market (kamer van koophandel, jaaroverzicht 2014). Because of this fact, this thesis considers the definition of the EC to be most applicable. Research of Weitzel & McCarthy (2011) also defines SMEs according to the EC.

Table 5 on the next page reports the summary of the sample of M&A deals among SMEs and large enterprises, per year, per industry and per status, according to the EC definitions of SMEs. These M&A deals possess the financials in order to analyse them. From this table a number of observations stand out. When the results of the sample of 6394 M&A deals are narrowed according to the EC definitions, a recorded total of 163 SME M&A deals are announced between 1 January 2005 and 31 December 2015. This total represents 13% of the total M&A deals that include financials. This number is relatively low. However, the observation of M&A deals by large enterprises outnumbering the number of M&A deals by SMEs, is also found by Moeller et al. (2005). Besides, research of Weitzel & McCarthy (2011) find that SMEs account for 20% of the total M&A deals over their sample period. Thus, the results of the sample of this data collection, being relatively small, are presumed to be sizeable for further research. Besides the observation of the total number of SME deals, analysing the industry level, most of the M&A deals conducted by SMEs are in the Healthcare and Consumer staples and the least present in the Industrials, Materials and Retail industry. The third observation from these summary statistics is that SMEs are mostly private targets in this sample. These results equal with the results of Weitzel & McCarthy (2011), who find that private targets are much more common than public targets. The frequency table of the announced deals per year provides results indicating that the M&A deals announced in the sample period are equally distributed among the years of the sample of this thesis. This table is table 17 in the appendix. Furthermore, the completion and withdraw rate in the frequency table 14 provides a clear observation with regard to the earlier assumption on the selection sample bias. The total withdrawn deals represent 1.14% of all the observed results. This result indicates that the sample of withdrawn deals will probably provide no

(statistical significant) results and probably no conclusions can be drawn from it, due to insufficient observations.

Table 5: *Summary statistics*

The sample contains all M&A deals announced between January the 1st 2005 and December 31th 2015 from database Thomson One. The acquisitions techniques recapitalization, self-tender, privatization, spinoff, and repurchase are excluded from the sample. All of the acquirers are located in the Netherlands, and are governmental, public, private or subsidiary type of acquirer and acquire a joint venture, private, publicly or subsidiary target. Acquirer is strategic, private equity is excluded. SMEs are defined by the definition of the EC.

Numbers of deals in year and per	***Micro enterprise***	***Small enterprise***	***Medium enterprise***	***Large enterprise***	***Total***	***SMEs in***
2005			7	125	148	4.73%
2006	1	6	7	154	201	6.97%
2007			3	175	192	1.56%
2008			6	131	155	3.87%
2009		5	1	78	101	5.94%
2010	5	1	3	78	112	8.04%
2011		3	7	96	119	8.40%
2012		1	5	58	73	8.22%
2013			11	38	51	21.57%
2014		1	1	54	63	3.17%
2015				28	32	0.00%
Total	6	17	51	1015	1247	5.93%
Industry of acquirer						
Consumer Products and Services			19	110	129	14.73%
Consumer Staples			27	77	104	25.96%
Energy and Power	5	10	4	25	44	43.18%
Financials		1	9	100	110	9.09%
Healthcare		1	28	39	68	42.65%
High Technology	1	14	8	165	188	12.23%
Industrials				289	289	0.00%
Materials				89	89	0.00%
Media and Entertainment		4	9	57	70	18.57%
Real Estate		1	5	67	73	8.22%
Retail				33	33	0.00%
Telecommunications		1	4	33	38	13.16%
Total	6	38	113	1084	1247	13.07%
Status of target						
Joint Venture		28	1	29	58	50.00%
Private	1	5	73	599	678	11.65%
Public	3	5	12	94	114	17.54%
Subsidiary	2		27	362	391	7.42%
Total	6	38	113	1084	1241	12.65%

4.1.1 Variable description

In the case of hypothesis 1, the relation between the engagement rate and enterprise size is analysed. In research of Moeller et al. (2004) and in research Weitzel & McCarthy (2011), the proxy for how active the market for M&A is in an industry (the engagement of enterprises in M&As), is calculated by the deal value (total amount payed for the target) divided by the book value of all assets of the acquirer in the corresponding year (Moeller et al., 2004). In order to provide results on the engagement rate this thesis adds the definitions of classification of a SME by the EC. To test the

relation between engagement and enterprise size, the dependent variables are the deal value per M&A deal, and number of M&A deals, both divided by the classified values of the EC defining SMEs. Equation 4.1 to 4.4 represents the standardization of the dependent variables.

The first dependent variable, Y_1 , is denoted as the deal value per M&A project in million euros (EUR mil) divided by the number of employees of the acquirer, is denoted with the following equation 4.1:

$$Y_1 = \frac{Deal\ Value}{Employees} \tag{4.1}$$

The second dependent variable, Y_2 , is the deal value per M&A project is divided by the latest twelve months (LTM) total turnover EUR mil, is denoted with the following equation 4.2:

$$Y_2 = \frac{Deal\ Value}{Total\ Turnover} \tag{4.2}$$

This is followed by the third dependent variable, Y_3 , which is denoted as deal value per M&A project, divided by total assets of the acquirer EUR mil, is denoted with the following formula 4.3:

$$Y_3 = \frac{Deal\ Value}{Total\ Assets} \tag{4.3}$$

The fourth dependent variable, Y_4 , contains the number of occurring M&A deals, divided by the total assets of the acquirer EUR mil, is denoted with the following formula 4.4:

$$Y_4 = \frac{Number\ of\ Deals}{Total\ Assets} \tag{4.4}$$

Table 8 in the next chapter presents an overview of the 'means' of the univariate results of the standardized dependent variables by a two-sided t-test. The next chapter includes a description of these results. The independent variable for hypothesis 1 is enterprise size, due to the differences between SMEs and large enterprises are analysed. A dummy for enterprise size, being SMEs (=1) and large enterprises (=0), is used. Besides, a dummy for micro, small, and medium enterprises is used for each of them separately in order to check on the robustness of the results of this empirical analysis.

For the withdraw rate of hypothesis 2, the dependent variable is a dummy for a withdrawn M&A deal (=1) and for a completed M&A deal (=0). The independent variables are the same size dummies as described with hypothesis 1. The robustness check will also consist of the same dummy variables described with hypothesis 1.

For hypothesis 3, the dependent variable consists of the percentage of stock payed for the M&A deal, the percentage of cash payed for the M&A deal, and the percentage of other in consideration as a payment for the M&A deal. The independent variables are defined the as described above with hypothesis 1 and 2, and the robustness check will also consist of the same dummy variables described above with hypothesis 1 and 2.

4.1.2. Control variables & summary statistics

M&A activity may be influenced by certain enterprise characteristics or M&A deal specific characteristics, as described in chapter 2.2 by research of King et al. (2004) and Marks & Mirvis (2011). For these effects, which are yet unobserved, a number of control variables are included for more reliable results. In total the research of this thesis applies seven control variables, being 1) *status* of the acquirer, 2) *status* of the target, 3) *attitude*, 4) *size*, 5) means of payment being *percentage of stock payment,* or 6) *percentage of cash payment*, and 7) *trend.*

The first two control variables contain the (public) status of the acquirer and the (public) status of the target, due to earlier research providing evidence for differences in the returns of enterprises (Faccio et al., 2006). Moreover, research documents acquirers of public targets earn zero or negative returns, while acquirers of private targets earn positive returns (Jaffe et al., 2015). Because of these findings, this thesis controls for the acquirer's status being public, private, joint venture, or subsidiary, and for the target's status being public, private, joint venture, or subsidiary. For each status a dummy is used.

Another factor that has to be taken into account is the presence of the possibility of a hostile takeover. A hostile takeover has impact on enterprise returns (Schwert, 1999). Therefore, to control for this possibility, an attitude control variable is added consisting of a friendly, hostile, and neutral M&A deal. Table 18 in the appendix provides the results of the frequency the attitude of the M&A deals. The results indicate that a hostile deal is only 0.03% present with 2 M&A deals being hostile. Neutral deals are present with 3.28%, including 210 M&A deals being neutral. The friendly deals consist of 96.68%. This indicates that the weight of the non-friendly deals is very low and will probably will provide no (statistical significant) conclusions. Although the frequency tables present these results this thesis still controls for the attitude of the deal.

Previous research by Moeller et al. (2004, 2005) and Weitzel & McCarhty (2011) indicate that large M&A deals, in most cases, under perform. Therefore, to control for this possibility, a logarithm of the deal values is included as control variable for size. This log of the deal value is not controlled with hypothesis 1, for being the dependent variable.

Furthermore, stock payments by the acquirer of the M&A deal are often linked with low returns subsequently to the M&A deal. Moeller et al. (2004) control for this situation by including the percentage of consideration paid in cash and paid in stock. The research of this thesis also controls for this situation by including a percentage of stock and cash as means of payment. As mentioned, the consideration paid in stock and cash also functions as a dependent variable when testing hypothesis 3. Thus, in the situation of hypothesis 3, there is no controlling for these variables.

Besides these control variables, the research of this thesis also denotes a control variable for the trend by using a dummy for this variable, to avoid the possibility of year specific unobserved effects including seasonal effects (Weitzel & McCarhty, 2011). The year of the M&A deal is used as a count variable to capture trending effects.

Table 6 provides the summary statistics of the important variables; deal value; target size (log deal value); acquirer number of employees, total turnover, and total assets; deal value divided by employees, total turnover, and total assets; deal number divided by total assets; and percentage of stock payment, cash payment, and other payment. This table shows the summary statistics like the mean, standard deviation and the min and max values of the variables included, and whether the data of the sample has certain outliers. The results are winsorized. The results of table 6 do not include strange outcomes which have to be further analysed.

Table 7 provides the correlations of the same variables. The results of table 7 show almost all variables are correlated with each other, being significant at the 1% level. Moreover, the low correlation among some of the predictors (below 0.70) suggests that data based multicollinearity is not of a serious issue in this research.

Table 6: *Summary statistics of important variables*

The sample contains all M&A deals announced between January the 1st 2005 and December 31th 2015 from database Thomson One. The acquisitions techniques recapitalization, self-tender, privatization, spinoff, and repurchase are excluded from the sample. All of the acquirers are located in the Netherlands, and are governmental, public, private or subsidiary type of acquirer and acquire a joint venture, private, publicly or subsidiary target. Acquirer is strategic, private equity is excluded. SMEs are defined by the definition of the EC. Target size is the logarithm of the deal values.

	Count	Mean	S.D.	Median	Min	Max
Deal value	1320	253.22	718.81	35.70	0.1	5142.3
Target size (log deal value)	1320	3.54	2.16	3.58	-2.3	8.55
Acquirer number of employees	1195	26605	46482	7131	9.0	236860
Acquirer total turnover	1495	8102	25614	1018	0.4	217475
Acquirer total assets	1541	35197	166109	1233	1.4	1235284
DV/Emp	395	0.27	1.44	0.01	0.0	24.8
DV/TT	438	1.08	8.54	0.04	0.0	135.8
DV/TA	446	0.56	3.94	0.02	0.0	56.2
NoD/TA	1541	11.63	46.63	0.49	0.0	588.2
Percentage of stock payment	52	0.62	0.35	0.60	0.1	1.0
Percentage of cash payment	637	0.94	0.17	1.00	0.1	1.0
Percentage of other payment	123	0.52	0.36	0.42	0.0	1.0
Deal Numbers	6394	602	114	588	412.0	830.0
N	6394					

Table 7: *Pairwise correlation test of important variables*

The sample contains all M&A deals announced between January the 1st 2005 and December 31th 2015 from database Thomson One. The acquisitions techniques recapitalization, self-tender, privatization, spinoff, and repurchase are excluded from the sample. All of the acquirers are located in the Netherlands, and are governmental, public, private or subsidiary type of acquirer and acquire a joint venture, private, publicly or subsidiary target. SMEs are defined by the definition of the EC. Acquirer is strategic, PE is excluded. Target size is the logarithm of the deal values.
Significance levels **p < 0.05, ***p < 0.01

	DV	Log DV	Aemp	ATT	ATA	DV/Emp	DV/TT	DV/TA	NoD/TA	PSP	PCP	POP	NoD
Deal value (DV)	1												
Target size (log DV)	0.576***	1											
Acquirer number of employees (Aemp)	0.242***	0.290***	1										
Acquirer total turnover (ATT)	0.300***	0.275***	0.481***	1									
Acquirer total assets (ATA)	0.0434	0.147***	0.356***	0.498***	1								
DV/Emp	0.233***	0.186***	-0.107**	-0.0692	-0.0524	1							
DV/TT	0.0104	0.0560	-0.0777	-0.0479	-0.0357	0.290***	1						
DV/TA	0.0147	0.0985**	-0.0630	-0.0522	-0.0401	0.259***	0.404***	1					
NoD/TA	-0.0707	-0.293***	-0.118***	-0.0715**	-0.0528*	0.0137	0.102*	0.180***	1				
Percentage of stock payment (PSP)	-0.0722	-0.0735	0.0158	0.0379	0.0539	-0.0656	0.2000	-0.1510	0.0524	1			
Percentage of cash payment (PCP)	-0.198***	-0.0805**	0.0884	0.1130	0.1170	-0.162**	-0.267***	-0.235***	0.0124	-0.791***	1		
Percentage of other payment (POP)	-0.0344	-0.219**	-0.1760	-0.0448	0.2260	0.1710	0.2150	-0.1010	-0.1520	0.2460	-0.934***	1	
Number of Deals (NoD)	-0.0059	-0.0090	0.0248	0.0640*	0.107***	-0.111**	0.0642	-0.0984**	-0.0984**	-0.2160	-0.0124	-0.354***	1

4.2 Methodology

In order to empirically consider on the formed hypotheses, different tests are conducted linking the hypotheses to the calculated models. The first step in the empirical analysis of this research is analysing preliminary data in order to check the frequency of the important variables in our analysis. The results of the frequency tables provide the number of observations of the concerned variables, and can already provide evidence whether or not the sample of the variables is reliable for further conclusions. The frequency tables are listed in the appendix of this thesis.

Before the regression models are applied, the Breusch-Pagan (1980) test is applied. This test assumes the regression disturbances are normally distributed, and is applied to test for homoscedasticity and heteroscedasticity of the residuals in the linear regression model. If either of the Breusch-Pagan (1980) test statistics is significant, there is evidence for heteroscedasticity, and the residuals are normally distributed. In the case of this situation, in all regression models there will be corrected for heteroscedasticity. If not, the test fails to reject the null hypothesis of homoscedasticity. This thesis applies the Breusch-Pagan (1980) test with the dependent variables of hypothesis 3, containing the percentage of stock payment, the percentage of cash payment, and the percentage of other payment. According to the findings of the Breusch-Pagan (1980) test, in the further regression models, the residuals are estimated according robustness standard errors and therefore corrected for homoscedasticity or heteroscedasticity. The results are presented in table 19 in the appendix. The test for homoscedasticity and heteroscedasticity of the residuals is followed by the tests for each hypothesis.

4.2.1 Hypothesis 1

Hypothesis 1 is: Dutch SMEs are more engaged in M&A projects than large Dutch enterprises. As discussed on page 33 in the variable description, the standardized dependent variables to measure engagement rate are calculated with formula 4.1 to 4.4 and are denoted as $Y_1, Y_2, Y_3,$ and Y_4. The standardization is the first step of testing hypothesis 1, and with the help of a two-side t-test the means of these dependent variables are compared between SMEs and large enterprises. From these results possible differences between SMEs and large enterprises may be observed. A different significant mean of SMEs could for example provide the first evidence towards hypothesis 1. Moreover, a more detailed analysis will test the impact of the independent and control variables on the dependent variables. For this detailed analysis an ordinary least squares (OLS) regression analysis is conducted to provide whether or not the independent variables are statistically significant in their relation to the dependent variables. This OLS regression model is common in testing the impact of an independent variable on the dependent variable and similar like research of Moeller et al. (2004) and Weitzel & McCarthy (2011). The model used to test the proxy for engagement rate by a regression is the following formula 4.5:

(4.5) $Y_{1,2,3,4} = \alpha + \beta_1 SME + \beta_2 APS + \beta_3 TPS + \beta_4 ATT + \beta_5 TRE + \varepsilon$

where:

$Y_{1,2,3,4}$ = the standardize dependent variables to measure engagement rate, discussed on page 33 in the variable description

α = the constant

SME = dummy for small and medium enterprises according the definitions of the EC

APS = control variable for acquirer public status

TPS = control variable for target public status

ATT = control variable for attitude

TRE = control variable for trend

ε = error term

The results of the OLS regression will provide evidence whether or not SMEs are statistically significant opposed to large enterprises in their relation to engagement in M&A deals. The mathematical denotation for the OLS regression hypothesis is: $H_0: \beta_1 \neq 0$ and $H_1: \beta_1 = 0$

For every different dependent variable Y, formula 4.5 includes the same independent- and control variables. The robustness of this result is checked by analysing the size dummies of micro, small, and medium enterprises. This requires equation 4.5. However, different independent variables for micro, small, and medium enterprises each replace the independent variable SME. Therefore a different model is applied for each independent variable. The 'β_1SME' will become '$\beta_1$micro enterprises', '$\beta_1$small enterprises', or '$\beta_1$medium enterprises' each in a different model when checking for robustness. The results of the robustness checks are presented in the appendix. As mentioned, the model of testing for engagement in M&A activity is also done by research of Weitzel & McCarthy (2011), who test the engagement rate and enterprise size in the US and Europe between 1996 and 2007. Thus, it is assumed that applying this model, for testing hypothesis 1, is correct and is assumed to provide sufficient evidence.

4.2.2 Hypothesis 2

The second hypothesis is: Dutch SMEs, who are involved in an M&A process, have a higher withdraw rate than large Dutch enterprises. The first step regarding this hypothesis is a two-sided t-test which provides the mean outcomes of the percentage of completed deals for both SMEs and large enterprises. These findings will present the first set of evidence whether SMEs are significantly different opposed to large enterprises. The frequency model in table 14 also presents some results concerning the number of withdrawn and completed deals. The relationship between completed deals of SMEs and large enterprises is analysed further with the help of a logistic regression. A logistic regression is conducted because the dependent variable is a dummy for a withdrawn M&A deal (=1)

and a completed M&A deal (=0). For hypothesis 2 the following model is applied to test the proxy for withdraw rate by a logistic regression model with the following formula 4.6:

(4.6)

$$Y = \alpha + \beta_1 SME + \beta_2 APS + \beta_3 TPS + \beta_4 ATT + \beta_5 SIZE + \beta_6 TRE + \beta_7 PSP + \beta_8 PCP + \varepsilon$$

where:

Y = dummy for the dependent variable withdrawn deals

α = the constant

SME = dummy for small and medium enterprises according the definitions of the EC

APS = control variable for acquirer public status

TPS = control variable for target public status

ATT = control variable for attitude

SIZE = control variable for size, which is the logarithm of the deal values

TRE = control variable for trend

PSP = control variable for percentage of stock payment

PCP = control variable for percentage of cash payment

ε = error term

For equation 4.6 different control variables are added to the previous equation 4.5 of hypothesis 1. The control variable trend, percentage of stock, and percentage of cash payment, are added to equation 4.5. Further all independent variables remain the same as in the equation 4.5 of hypothesis 1.

For the robustness check of this hypothesis the same variables are added to the equation 4.6 as for hypothesis 1. The results will provide evidence whether or not SMEs are statistically significant with their size dummy to support the second hypothesis. The mathematical denotation for the null hypothesis of the OLS regression hypothesis is: $H_0: \beta_1 \neq 0$. Meaning, if the relation between the increasing independent variable; enterprise size, and the dependent variable; increasing likelihood of the completion rate, is significant, SMEs have indeed a higher withdraw rate than large enterprises. The results of the robustness check are presented in the appendix.

4.2.3 Hypothesis 3

The third hypothesis is: the relation between increasing enterprise size and cash (stock) as means of payment is negative (positive) for Dutch SMEs and Dutch large enterprises. The first analysis is to test this hypothesis on a univariate basis with the help of a two-sided t-test. This test provides the average percentage of payment being with stock, cash, or other, for both SMEs and large enterprises, and for micro, small, medium enterprises each. The mean of percentage of payment of both stock and cash of SMEs is compared with the mean of both percentage of payment in cash and stock of large

enterprises. As mentioned, this is the first analysis in other to find evidence for the relation: increasing enterprise size and a decrease in cash payment, and increasing enterprise size and an increase in stock payment. This will not provide enough evidence for hypothesis 3. Therefore, the relation between the dependent variables, means of payment, and the independent variables, enterprise size, is analysed by an OLS regression. The following equation 4.7 is applied for testing hypothesis 3:

$$(4.7) \quad Y_{1,2,3} = \alpha + \beta_1 SME + \beta_2 APS + \beta_3 TPS + \beta_4 ATT + \beta_5 SIZE + \beta_6 TRE + \varepsilon$$

where:

Y_1 = the percentage of stock payed for the M&A deal (PSP)

Y_2 = the percentage of cash payed for the M&A deal (PCP)

Y_3 = the percentage of other in consideration as a payment for the M&A deal (POP)

α = the constant

SME = dummy for small and medium enterprises according the definitions of the EC

APS = control variable for acquirer public status

TPS = control variable for target public status

ATT = control variable for attitude

SIZE = control variable for size, which is the logarithm of the deal values

TRE = control variable for trend

ε = error term

For each dependent variable $Y_{1,2,3}$, equation 4.7 holds. For the robustness check of this hypothesis, the variable SME is replaced by the same independent variables of hypothesis 1 and hypothesis 2 (micro, small, and medium enterprises).

With the help of this regression the results will indicate if the independent variables are significant in their relation to the dependent variable. The mathematical denotation for the null hypothesis of the OLS regression hypothesis is: $H_0: \beta_1 \neq 0$. Thus, if there is enough evidence to either accept or reject hypothesis 3.

By applying the regression tests described in this chapter, the research of this thesis will attempt to provide evidence whether the independent variables are statistically significant with their influence on the dependent variables within each hypothesis. Every null hypothesis will be analysed and, if possible, be accepted or rejected.

5. Results

This chapter empirically tests three hypotheses by using the data, two-sided t-tests, and OLS regression estimation methods as described in the previous chapter. In addition, robustness tests and additional analyses are performed. The results of these analyses are described in this chapter by empirically commenting on each of the earlier formed hypotheses. After reviewing all of the empirical results each hypothesis is concluded.

Before testing all of the formed hypotheses, the Breusch-Pagan (1980) test is applied for homoscedasticity and heteroscedasticity of the residuals, and, as table 19 indicates, the chi-statistic of model (2) and (3) is below the 5% level. This indicates that the test statistics are significant, and provide evidence of heteroscedasticity, implying the residuals are normally distributed. Therefore, heteroscedasticity is accepted in all of the models. This regression analysis corrects for heteroscedasticity of the residuals of the model by estimating the residuals by using robust standard errors.

5.1 Results hypothesis 1

Hypothesis 1 contains the standardized dependent variables described in the methodology. The univariate results of the two-sided t-test are provided in table 8. The two-side t-test compares the mean of each scaled engagement rate proxy for SMEs and large enterprises. Furthermore, a more detailed overview is also provided including the mean of each scaled engagement rate proxy of micro, small, and medium enterprises separately. From these results it becomes clear that SMEs are statistically different compared to their opposing large enterprises. The scaled proxy for engagement rate is provided in the different columns. The coefficients indicate the proxy for engagement rate, therefore, the higher the number, the more the enterprise is reliable on external growth by M&A activity. The results show that the mean of SMEs is statistically, significantly different compared to the mean of large enterprises. Besides, the results show that the coefficient is higher for SMEs, which provides evidence for SMEs, who have engaged in M&A activity during the time frame of the sample, rely significantly to a greater extent on external growth than large enterprises. This is in favour of hypothesis 1. Analysing micro, small, and medium enterprises separately, the results show the highest coefficient for small enterprises, followed by medium enterprises, and the lowest for large enterprises. This means large enterprises are the least reliable on external growth by M&A activity. This is also in favour of hypothesis 1. Besides this two-sided t-test, a more detailed analysis is provided by applying an OLS regression test. With the help of this regression, it is assumed there is enough evidence to comment on the hypothesis.

The OLS regression test provides results for the different standardized dependent variables. The results are presented in table 9. Model (1), (3), (5), and (7) test the independent variable (SME) against the four different dependent variables. Control variables are added being acquirer public status (being joint venture, private, public, and subsidiary), target public status (being joint venture, private,

public, and subsidiary), attitude, (being hostile and neutral), and trend. Of main interest are the coefficients of independent variable, SME, shown at the top row of table 9. These coefficients show that the effect on the dependent variable Y_4 is significant at the 1% level. This result indicates that the relative effect of the proxy for average engagement level of SMEs, measured in the standardized Y_4 by equation 4.4, is 65.4 times more for SMEs than for large enterprises when applying the standardized engagement value of Y_4. The number of observations (1167) for this dependent variable is assumed to be sufficient to be applied for conclusions. Furthermore, the effect on the dependent variable Y_2 becomes significant at the 5% level. This significant coefficient indicates that the average engagement level of SMEs, measured in the standardized Y_2 by equation 4.2, is 5.9 times more for SMEs, than for large enterprises when applying the standardized engagement value of Y_2. The number of observations (394) for this dependent variable is assumed to be sufficient to be applied for conclusions. These combined results indicate that with the dependent variable 'number of deals divided by total assets' and 'deal value divided by total turnover', SMEs, which are engaged in M&A activity, rely with a more extent on external growth than large enterprises. The effect on the standardized dependent variables Y_1 and Y_3 become significant at the 10% level. This statistically significance level does not indicate a strong conclusion concerning SMEs being more reliable on external growth when engaged in M&A activity. However, due to the fact that the coefficients are significant it is assumed that they have sufficient influence and therefore provide evidence for the first hypothesis.

The results of the robustness check, table 20 in the appendix, show some significant effects of the independent variables belonging to the robustness check (being micro, small, and medium enterprises, each). Moreover, the robustness check of the effect on the dependent variable in model (8) indicates that the results are significant at the 1% level for all three types of enterprises, and the medium sized enterprises show significant coefficients at the 10% level for model (4) and (6). The control variables are not statistically significant. This implies no conclusions can be drawn upon the effect of the control variables on the dependent variable in the model.

Table 8: *Two sided t-test provided to measure the standardized results of the dependent variables*

Enterprise Size:	DV/Emp	DV/TT	DV/TA	NoD/TA
Micro	0.23	2.82	0.75	105.92
Small	0.56	3.45	3.13	204.76
Medium	0.52	3.40	1.87	65.63
SME	0.53**	4.20**	1.92**	70.29**
Large	0.26	0.56	0.15	1.31
Total	0.27	1.08	0.56	11.63

** SME average statistically different from large enterprise average at 0.05 significance level (two-sided t-test)

Table 9: *OLS regression for hypothesis 1*

The sample contains all M&A deals announced between January the 1st 2005 and December 31th 2015 from database Thomson One. The acquisitions techniques recapitalization, self-tender, privatization, spinoff, and repurchase are excluded from the sample. All of the acquirers are located in the Netherlands, and are governmental, public, private or subsidiary type of acquirer and acquire a joint venture, private, publicly or subsidiary target. SMEs are defined by the definition of the EC. Acquirer is strategic, private equity is excluded. Regression results with the first difference of standardized dependent variables representing the different proxies for engagement rate in M&A activity. Independent variables include explanatory and control variables. Independent variables include 1 value as SMEs and 0 value for large enterprises. Robustness check is performed with the independent variables of micro, small, and medium enterprises as defined by the EC. Some control variables are dropped due to statistical insignificance. Standard errors in parentheses. Significance levels are *** p<0.01, ** p<0.05, * p<0.1

	(1)	(3)	(5)	(7)
Dependent variable:	DV/Emp	DV/TT	DV/TA	NoD/TA
Independent variables:				
SME	0.388*	5.944**	1.737*	65.418***
	(0.212)	(2.785)	(1.027)	(8.894)
APS = "Joint Venture"	0.040	-0.521	-0.364	0.341
	(0.430)	(8.063)	(0.370)	(4.028)
APS = "Private"	-	-	-	-
APS = "Public"	0.125	0.483	0.304	0.095
	(0.096)	(0.785)	(0.330)	(2.408)
APS = "Subsidiary"	-0.217	-1.865	0.062	1.535
	(0.296)	(2.324)	(0.369)	(2.615)
TPS = "Joint Venture"	-	-	-	-6.946
				(5.000)
TPS = "Private"	-0.665	-12.538	-1.081	-4.141
	(0.629)	(12.606)	(1.159)	(5.123)
TPS = "Public"	-0.598	-11.754	-1.057	
	(0.632)	(12.474)	(1.143)	
TPS = "Subsidiary"	-0.419	-11.666	-1.197	-7.838
	(0.611)	(12.409)	(1.136)	(4.830)
ATT = "Hostile"	-	-	-	-
ATT = "Neutral"	-0.113	-1.958	-0.494	-0.494
	(0.108)	(1.453)	(0.334)	(0.334)
TRE	0.081	0.079	-0.004	-5.576*
	(0.052)	(0.077)	(0.009)	(2.843)
Constant	0.454	11.457	0.944	0.271*
	(0.595)	(11.856)	(1.139)	(0.146)
Table 9, continued:				
Year dummies	Yes	Yes	Yes	Yes
Robust standard errors	Yes	Yes	Yes	Yes
Observations	394	394	394	1167
R-squared	0.070	0.209	0.079	0.758
adj. R-squared	0.025	0.171	0.035	0.754
F-statistic	1.057	0.685	0.828	19.670
p(F)	0.395	0.827	0.668	0.000

Concluding, the results of the two-sided t-test provide evidence for SMEs being statistically different from large enterprises, and for SMEs, who have engaged in M&A activity during the time frame of the sample, rely significantly to a greater extent on external growth than large enterprises. Besides, the more detailed OLS regression test provides evidence for hypothesis 1 because of the results of all independent variables being statistically significant with their effect on the dependent

variables. This suggests that Dutch SMEs, who engage in M&A activity during the analysed period, rely with a more extent on external growth than large Dutch enterprises.

5.2 Results hypothesis 2

Hypothesis 2 analyses the withdraw and completion rate of the acquiring enterprise subsequent to the M&A announcement. The first test regarding this hypothesis is table 10. These observations are the result of a two-sided t-test in order to provide the mean of the completion rate of SMEs and large enterprises. Results from table 10 provide that large enterprises are statistically significantly different from SMEs when comparing the mean of completion rate. Large enterprises have a higher mean compared to SMEs (except for micro, but due to 100 percent being completed this number is ignored). Besides, table 10 provides results where small enterprises seem to complete less M&A deals than medium enterprises, and medium enterprises in turn complete less M&A deals than large enterprises. This indicates SMEs have a higher withdraw rate than large enterprises. This is evidence in favour for hypothesis 2. The relation between increasing size of the enterprise and the number of deals completed seems to be positively related. Due to the low amount of observations no further conclusions can be drawn upon micro enterprises and their completion and withdraw rate. The 100% of completed deals of the micro enterprises is the result of the low amount of observations of micro enterprise announced deals being 12 of the total of 1247 deals (table 5), and the total of withdrawn deals being 1.14% of the total announced deals (table 14, appendix). These results, of table 14 in the appendix, indicate that further testing will include far more weight on the completion rate of M&A deals, and that probably no results will be significant due to their low appearance in the sample. However, in order to further investigate the impact of the withdrawn and completed deals a logistic regression will be conducted.

This regression will test the relationship between the dependent variable, which is denoted by a dummy for withdrawn M&A deals, and the independent variable being SMEs. A number of control variables are added, being the acquirer status, the target status, attitude, size, trend, percentage of stock payment, and percentage of cash payment. The robustness check will conduct the regression test with de independent variables of each different enterprise size. The results of the robustness check will be presented in the appendix in table 21.

The results of the logistic regression are presented in table 11. The top row and first column provide the coefficient of the relation. This coefficient is not significant. This means there is no evidence for SMEs having a statistically significant effect on the withdraw rate. Therefore, the results provide no evidence for hypothesis 2. The number of observations is only 23 observations. This sample size is not sufficient to correctly test the relation between the dependent and independent variables. Besides the dependent variables, the control variables and robustness check variables are also not found to be significant. Due to the low number of observations, and low number of attitude ‘hostile’ and ‘friendly’ there are missing values for some control variables. This means the control

variables seem to have no significant influence on the completed or withdrawn deal. Unfortunately the data sample size does not provide enough observations to provide a reliable conclusion regarding the withdraw rate and completion rate of SMEs compared to large enterprises.

Table 10: *The two-sided t-test measuring the mean percentage of completed deals by enterprise size*

Enterprise Size:	***Completed***
Micro	100.0%
Small	92.1%
Medium	94.7%
SME	95.9%
Large	97.9%***
Total	98.8%

***Large enterprise average statistically different from SME average at 0.05 significance level (two-sided t-test)

Table 11: *logistic regression for hypothesis 2*

The sample contains all M&A deals announced between January the 1st 2005 and December 31th 2015 from database Thomson One. The acquisitions techniques recapitalization, self-tender, privatization, spinoff, and repurchase are excluded from the sample. All of the acquirers are located in the Netherlands, and are governmental, public, private or subsidiary type of acquirer and acquire a joint venture, private, publicly or subsidiary target. SMEs are defined by the definition of the EC. Acquirer is strategic, private equity is excluded. Regression results with a dummy of dependent variable, representing the withdraw rate. Independent variables include explanatory and control variables. 1 value for SMEs and 0 value for large enterprises. Robustness check is performed with the independent variables of micro, small, and medium enterprises as defined by the EC. Standard errors in parentheses |significance levels are *** p<0.01, ** p <0.05, * p <0.1

Dependent variable:	Withdrawn deal dummy Model (1)
Independent variables:	
SME	6.143
	(23.008)
APS = "Joint Venture"	-
APS = "Private"	-
APS = "Public"	-
APS = "Subsidiary"	-
TPS = "Joint Venture"	-
TPS = "Private"	1.592
	(4.924)
TPS = "Public"	0.000
	(0.000)
TPS = "Subsidiary"	-
ATT = "Hostile"	-
ATT = "Neutral"	-
SIZE (log deal value)	3.013
	(2.929)

Table 11, *continued:*

TRE	0.272
	(0.304)
PSP	1.235
	(0.204)
PCP	1.106
	(0.131)
Constant	.
	(.)
Observations	23
pseudo R2	0.437
Chi-statistic	9.284

Concluding, the results of the two-sided t-test provide evidence for hypothesis 2, however the logistic regression test provides not enough evidence to accept or reject hypothesis 2, due to the fact that no independent variable or control variable is found to be statistically significant. The low amount of observations is probably the main issue regarding the non-significant results. Therefore, the conclusion is that, despite there is evidence for hypothesis 2 from the two-sided t-test, no conclusion can be provided for hypothesis 2 due to the logistic regression not providing significant results in favour of hypothesis 2. The logistic regression applied the withdraw rate and the completion rate as a proxy for self-interested drivers. It is quite possible that managers do not only withdraw from deals because of value decreasing drivers. A possible reason for the higher withdraw rate of SMEs may also be the difficulty SMEs face by reaching their needed (external) finance. For large enterprises external finance is easier to reach, as explained in chapter 3. Also, managers of SMEs, some being unexperienced in the world of M&As, may suddenly face stage fright and forgo the expected and announced deal. Therefore, besides the logistic regression, by logical reasoning no clear conclusions are presented in favour the value decreasing drivers.

5.3 Results hypothesis 3

Hypothesis 3 claims that the relation between increasing enterprise size and cash (stock) as means of payment is negative (positive) for Dutch SMEs and Dutch large enterprises. In other words, the larger the enterprise, the more stock is used as means of payment, and the smaller the enterprise, the more cash is used as means of payment.

The first measurement to provide evidence for this hypothesis is a two-sided t-test to provide univariate results regarding the average percentage payed for the M&A project. From table 12, which provides the results of the two-sided t-test, some observations can be drawn. The percentages in the table are the averages of SMEs according to each form of payment being percentage of stock payment, percentage of cash payment, and percentage of other payment. First, the results show that there is a statistically significant difference between the mean of SMEs and the mean of large enterprises. SMEs are significantly different in the probability of cash payment, and large enterprises are significantly different in the probability of stock payment. The second observation is that the

probability of stock payment increases as enterprise size increases. The larger the enterprise, the more average percentage of stock payment. This is in favour of the relation described above. The third observation, from table 12, is the probability of cash payment deceases as enterprise size increases. This is also in favour of hypothesis 3. The overall preferred means of payment is cash according to the results of table 12, because PCP has the highest mean percentage and also among all the different enterprises. This is correct according to the pecking order theory.

The t-test provides evidence favour of hypothesis 3. However, more detailed information is obtained from the OLS regression test. This regression will further test the impact on the dependent variables stock, cash, and other means of payment, of the independent variable enterprise size and a number of control variables. The results are shown in table 13 on the next page. From these results the important coefficients are in the first row. The effect on the dependent variable 'percentage of cash as payment for the M&A deal' is proven to be significant at the 5% level. The significant coefficient indicates that SMEs pay proportionally more cash compared to large enterprises. This is in favour of hypothesis 3. The robustness check, presented in table 22 in the appendix, is significant only for medium sized enterprises. However, the significant coefficient of the dependent variable provides enough evidence for part of hypothesis 3, by stating SMEs, who are involved in an M&A process, pay proportionally more with cash than large enterprises. Therefore, indicating the relation, the larger the enterprise, the less cash is used as means of payment. The effect on dependent variable percentage of stock payment and percentage of other payment are both not found significant and cannot provide evidence. It is presumed the low amount of observations, 42 in model (1)-(2) and 47 in model (5)-(6), is the cause of these non-significant results. The control variable 'size' does seem to have significant impact in model (1) – (4). This result indicates that enterprise size has a significant effect on the dependent variable, being means of payment. Therefore, it provides evidence that the size of an enterprise influences the choice of payment for the M&A deal. The constant of the regression model is also significant for model (1) and (3), this however has no further impact.

Table 12: *Probability of means of payment for target enterprise by SMEs and large enterprises*

Enterprise Size:	PSP	PCP	POP
Micro	51.26%	96.50%	60.23%
Small	48.50%	96.42%	59.10%
Medium	57.81%	95.72%	59.38%
SME	52.52%	96.21%**	59.57%**
Large	60.07%***	94.41%	52.47%
Total	61.54%	94.24%	51.91%

** SME average statistically different from large enterprise average
*** Large enterprises average statistically different from SME average at 0.05 significance level (two-sided t-test)

Table 13: *OLS regression for hypothesis 3*

The sample contains all M&A deals announced between January the 1st 2005 and December 31th 2015 from database Thomson One. The acquisitions techniques recapitalization, self-tender, privatization, spinoff, and repurchase are excluded from the sample. All of the acquirers are located in the Netherlands, and are governmental, public, private or subsidiary type of acquirer and acquire a joint venture, private, publicly or subsidiary target. SMEs are defined by the definition of the EC. Acquirer is strategic, private equity is excluded. OLS regression with dependent variables stock, cash, or other in consideration, as a means of payment. Independent variable enterprise size with 1 value are SMEs and 0 value for large enterprises. Standard errors in parentheses. Significance levels are *** p<0.01, ** p<0.05, * p<0.1

	(1)	(3)	(5)
Dependent variable:	Percofstock	Percofcash	Percofother
Independent variables:			
SME	0.263	0.171**	-0.179
	(0.166)	(0.071)	(0.337)
APS = "Joint Venture"		0.307***	
		(0.096)	
APS = "Private"	-	-	-
APS = "Public"		0.114*	0.082
		(0.065)	(0.137)
APS = "Subsidiary"		0.155*	0.319
TPS = "Joint Venture"			
TPS = "Private"	-0.765	-0.077	-1.132
	(0.468)	(0.186)	(4.012)
TPS = "Public"	-0.137	0.056	-0.777
	(0.468)	(0.185)	(4.128)
TPS = "Subsidiary"	-0.573	0.063	-1.006
	(0.484)	(0.181)	(4.012)
ATT = "Hostile"	-	-	-
ATT = "Neutral"	-0.149	0.072	
	(0.251)	(0.053)	
SIZE (log deal value)	-0.061**	-0.031***	-0.056
	(0.026)	(0.010)	(0.048)
TRE	-0.011	0.010	0.038
	(0.025)	(0.009)	(0.029)
Constant	1.398***	0.792***	1.539
	(0.496)	(0.192)	(4.017)
Year dummies	Yes	Yes	Yes
Robust standard errors	Yes	Yes	Yes
Observations	42	197	47
R-squared	0.556	0.211	0.421
adj. R-squared	0.300	0.126	0.082
F-statistic	0.000	0.000	0.952
p(F)	0.000	0.000	0.529

Concluding, the first set of evidence in favour of hypothesis 3 is presented in the two-sided t-test. This test provides evidence for a statistically significant difference between the mean of SMEs and the mean of large enterprises. Second, the results show that the probability of stock payment increases as enterprise size increases, and third, the probability of cash payment deceases as enterprise size increases. For a more detailed analysis an OLS regression is applied. This test provides evidence

for percentage of cash as means of payment having statistically significant effect on a SME. In other words, the smaller the enterprise (becoming a SME) the more cash is preferred as means of payment. Due to the low amount of observations, considering the effect on the dependent variable 'percentage of stock payment' and 'percentage of other in consideration', the effect on these two dependent variables is not found to be statistically significant. However, if an enterprise choses to pay with more cash, logically the enterprise pay less in stock or other consideration. Due to the relation of increasing enterprise size and cash as means of payment being negative (two-sided t-test; OLS regression test) it is assumed that the relation of increasing enterprise size and stock as means of payment being positive (two-sided t-test; logical reasoning).

5.4 Conclusion of the results

This conclusion will briefly state per hypothesis whether or not the hypothesis is accepted or rejected or there is insufficient evidence for either accepting or rejecting the hypothesis.

> **Hypothesis 1:** Dutch SMEs are more engaged in M&A projects than large Dutch enterprises.
> *This hypothesis is accepted.*

The results of the two-sided t-test provide evidence provide evidence for the mean of the proxies for engagement rate of SMEs being statistically different form large enterprises. Moreover, the OLS regression test provides statistically significantly effect of the coefficients of the independent variable, being SME.

> **Hypothesis 2:** Dutch SMEs, who are involved in an M&A process, have a higher withdraw rate than large Dutch enterprises.
> *Insufficient evidence is presented to accept this hypothesis due to the low amount of observations.*

The results of the two-sided t-test provide the mean of the completion rate of the large enterprises being statistically significantly different from SMEs. However, the logistic regression provides no statistically significant results for the independent variable SME.

> **Hypothesis 3a:** The relation between increasing enterprise size and cash as means of payment is negative for Dutch SMEs and Dutch large enterprises.
> *This hypothesis is accepted.*
> **Hypothesis 3b:** The relation between increasing enterprise size and stock as means of payment is positive for Dutch SMEs and Dutch large enterprises.
> *By logical reasoning due to hypothesis 3a, and the two-sided t-test this hypothesis is accepted.*

The two-sided t-test provides evidence for a statistically significant difference between the means of SMEs and large enterprises. Second, the results show that the probability of stock payment increases as enterprise size increases, and third, the probability of cash payment deceases as enterprise size increases. Moreover, the OLS regression test provides evidence for percentage of cash as means of payment having statistically significant effect on a SME. However, if an enterprise choses to pay with more cash, logically the enterprise pay less in stock or other consideration. Due to the relation of increasing enterprise size and cash as means of payment being negative (two-sided t-test; OLS regression test) it is assumed that the relation of increasing enterprise size and stock as means of payment being positive (two-sided t-test; logical reasoning).

6. Conclusion, limitations, and further research

This chapter concludes the research of this thesis by answering the main question and sub-questions and commenting on the results regarding the hypotheses. This is followed by limitations of this research and provides conclusions for further research.

6.1 Conclusion of research of the thesis

The main question of this thesis is:

What are the theories to engage in M&A projects, and do these theories differ between large enterprises and SME in the Netherlands?

In order to provide a clear answer on the main research question, this thesis applies four different sub-questions to narrow down the main research question. The sub-questions are answered by reviewing leading academic research regarding the topic of each sub-question.

The first sub-question concerns SMEs:

How are SMEs defined and what is their role in the Dutch society?

The EC defines SMEs according to a quantitative definition by fulfilling three criteria including staff headcount, turnover, and total assets. The European and the Dutch statistical facts show significant evidence stating SMEs are crucial for the performance of the Dutch economy, which emphasises the role of SMEs in the Dutch society.

The second sub-question concerns M&A:

What are the critical factors in each M&A phase, and how does it impact the outcome and performance of M&A activity?

The different phases of an M&A transaction consists of the pre-M&A, the M&A transaction, and the post-M&A phase. The critical factors are split up into success factors and into factors of failure. There are several critical factors in the pre- and post-M&A phase, both positive and negative of influence on M&A performance.

The third sub-question is:

What are the theories of drivers of large enterprises to engage in M&A activity? After incorporating research of Brouthers et al. (1998) and Haleblian et al. (2009), a distinction is made between the following leading drivers: *value increasing drivers, self-interest drivers* (value decreasing drivers)*, external environmental drivers,* and *firm characteristic drivers.*

With the help of the first three sub-questions a clear overview of the topics, regarding the main research question, is given. The theories of drivers of large enterprises to engage in M&A projects have been analysed, and the level of applicability of these drivers to SMEs are measured by defining different hypotheses and empirically commenting on them. With the help of the empirical analysis, possible differences are detected.

The fourth sub-question is:

How can the theory of drivers for M&A activity be applied to SMEs?

The first drivers analysed are the value increasing drivers. The following proposition is stated: M&As of SMEs are more profitable, resulting in a higher change of success, managers are aware of his fact, which results in SMEs pursuing more external growth through M&A behaviour, which in turn results in SMEs engaging in M&A activity with a higher extent than large enterprises. Therefore, value increasing drivers to engage in M&A activity have a higher impact on Dutch SMEs than on large Dutch enterprises. Hypothesis 1: Dutch SMEs are more engaged in M&A projects than large Dutch enterprises. The results of a two-sided t-test and the more detailed OLS regression test provide evidence for this hypothesis and therefore this hypothesis is accepted. **Thus, value increasing drivers to engage in M&A activity differ between Dutch SMEs and Dutch large enterprises.**

The second drivers analysed are the managerial self-interested drivers. The following proposition is stated: due to fact that SMEs are often managed by the owner, agency costs occur less in SMEs, therefore interest of managers is more closely aligned with the owners. This in combination with transparency and information asymmetry within SMEs, SMEs are more likely to withdraw from unsuccessful M&A deals. Therefore, self-interested drivers to engage in M&A activity have less impact for Dutch SMEs than for large Dutch enterprises. Hypothesis 2: Dutch SMEs, who are involved in an M&A process, have a higher withdraw rate than large Dutch enterprises. The results of a two-sided t-test provide evidence for hypothesis 2, however a logistic regression test provides not enough evidence to accept or reject hypothesis 2. Thus, no conclusion concerning the withdraw rate is made. **Therefore, no evidence is found for differences in managerial self-interested drivers between Dutch SMEs and Dutch large enterprises.**

The third category of drivers analysed are external environmental drivers. Because of this earlier research explaining external environmental drivers for M&A activity for both large enterprises and SMEs being irrelevant, no hypothesis is formed for possible differences. **Thus, no evidence is found for differences in external environmental drivers between Dutch SMEs and Dutch large enterprises.**

The fourth category of drivers analysed are the firm characteristic drivers. The following proposition is formulated: Firm characteristic drivers to engage in M&A activity differ between Dutch SMEs and Dutch large enterprises. Therefore, the following hypothesis is formulated: Hypothesis 3: The relation between increasing enterprise size and cash (stock) as means of payment is negative (positive) for Dutch SMEs and Dutch large enterprises. A two-sided t-test and a more detailed OLS regression provide evidence for the following: The relation between increasing enterprise size and cash as means of payment is negative for Dutch SMEs and Dutch large enterprises. This hypothesis is accepted.

Hypothesis 3b: The relation between increasing enterprise size and stock as means of payment is positive for Dutch SMEs and Dutch large enterprises. By logical reasoning due to hypothesis 3a, and the two-sided t-test this hypothesis is accepted. **Therefore, firm characteristic drivers differ between Dutch SMEs and Dutch large enterprises.**

Concluding on the main question; some of the theories of drivers of Dutch SMEs to engage in M&A activity differ from large enterprises. The drivers that differ are the value increasing drivers and firm characteristic drivers. No evidence for differences in self-interested drivers or external environmental driver is found.

6.2 Limitations and recommendations for further research

The biggest limitation to this research is the sample size. Only one data base is consulted to provide data for the sample. With the results of the empirical analysis, often the observations are not above 50 observations. This is not enough for reliable results. Although the period of research is ten years, only 13% consists of M&A transactions by SMEs. This is probably because SMEs are not mandatory to disclose the financials regarding their M&A deal and therefore the data sample does not include absolute total of M&A deals of SMEs. Besides, when an M&A deal is announced in 2015, it is very possible that the results of this announced deals are not yet disclosed in the data collection. Therefore the results of 2015 do not include all M&A data of 2015. Besides the data, definitions concerning SMEs need to be agreed upon for a better understanding and complete research.

Furthermore, the proxy of value increasing drivers is engagement rate. It can be argued that there are more measurements for value increasing drivers. A possible measurement could be cost synergies achieved by M&A deals, as these are, in my opinion, the most applied drivers for M&A behaviour. The withdraw rate is the proxy for managerial self-interested drivers. As mentioned in the results, a withdrawn deal could also be the result of a manager who suddenly feels freighted about the upcoming and announced deal and as a result withdraw the announced deal. Moreover, the withdraw rate could also be the result of not being able to reach the external (or internal) finance. Therefore, it can be argued that the withdraw rate is not a sufficient proxy for managerial self-interested drivers.

Future research could include more reliable data to the sample to extract more reliable results regarding SMEs and their drivers for M&A behaviour. A sample size of over 10,000 deals would probably provide sufficient observations. More than 100 observations would provide reliable conclusions. With the help of surveys more data could be extracted. One could argue that enterprise age is also a sufficient indicator of an enterprise. A measurement on age may provide more reliable data to empirically consider on the hypotheses. Furthermore future research could test whether the hypotheses holds for other countries like Belgium, Germany, France, or other European countries. If there is more data, more reliable results for evidence regarding the hypotheses could be presented. Furthermore, the tests of this thesis could be applied to the United States to analyse whether there are the same differences experienced in the Netherlands or the EU. The United States will probably provide enough sufficient data for conclusions.

This thesis provides an extensive literature overview, containing relevant and leading academic literature concerning the theories of the drivers for M&A activity. The existing gap in

literature between these theories of drivers for M&A activity is addressed. This thesis provides existing literature evidence, which suggests that the behaviour and financial success of M&As by SMEs significantly differs from large enterprises at certain theoretical explained drivers. Subsequently, current M&A theories, which include the drivers for these M&A projects, should be reconsidered and corrected for SMEs. This thesis is a start of research on the phenomenon SMEs and their drivers for M&A behaviour. Much research still has to be done, however this thesis clearly concludes that drivers between SMEs and large enterprises may differ.

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Appendix

Table 14: Frequency table *deal status*

Status	***N***	***%***	***Cumulative %***
Completed	6321	98.86%	98.86%
Withdrawn	73	1.14%	100.00%
Total	6394	100.00%	

Table 15: Frequency table *target public status*

TPS	***N***	***%***	***Cumulative %***
Government	4	0.06%	0.06%
Joint Venture	116	1.81%	1.88%
Private	3381	52.88%	54.75%
Public	512	8.01%	62.76%
Subsidiary	2381	37.24%	100.00%
Total	6394	100.00%	

Table 16: Frequency table *acquirer public status*

APS	***N***	***%***	***Cumulative %***
Government	22	0.34%	0.34%
Joint Venture	62	0.97%	1.31%
Private	3141	49.12%	50.44%
Public	1162	18.17%	68.61%
Subsidiary	1959	30.64%	100%
Total	6394		

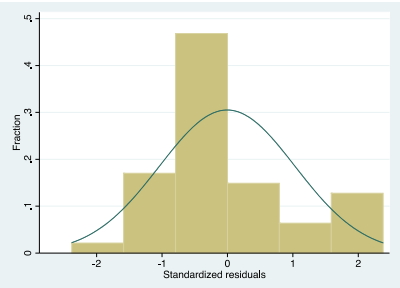
Table 17: Frequency table *announced deals per year*

Year	***N***	***%***	***Cumulative %***
2005	564	8.82%	8.82%
2006	633	9.90%	18.72%
2007	696	10.89%	29.61%
2008	830	12.98%	42.59%
2009	599	9.37%	51.95%
2010	586	9.16%	61.12%
2011	588	9.20%	70.32%
2012	533	8.34%	78.65%
2013	485	7.59%	86.24%
2014	468	7.32%	93.56%
2015	412	6.44%	100.00%
Total	6394	100.00%	

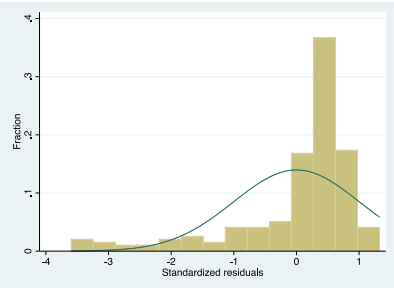
Table 18: Frequency table *attitude*

ATT	***N***	***%***	***Cumulative %***
Friendly	6182	96.68%	96.68%
Hostile	2	0.03%	96.72%
Neutral	210	3.28%	100.00%
Total	6394	100.00%	

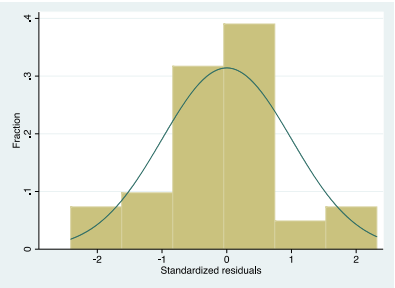
Figure 4: *Histogram of residuals*



d. Residuals from regression with dependent variable PercofOther.

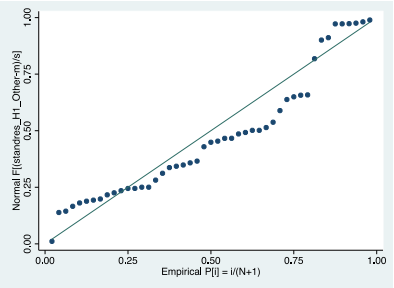


e. Residuals from regression with dependent variable percofCash.

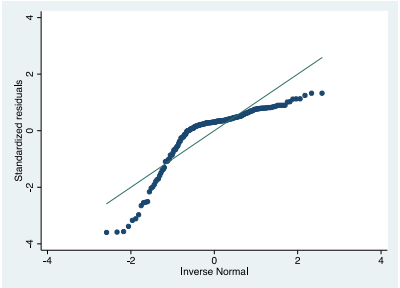


f. Residuals from regression with dependent variable PercofStock.

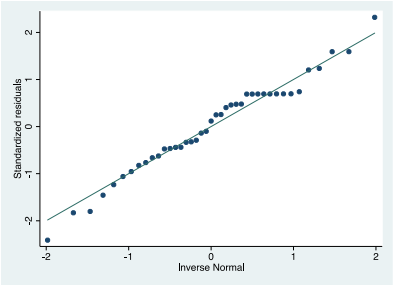
Figure 5: *QQ plot of residuals*



d. QQ plot of residuals from regression with dependent variable PercofOther.

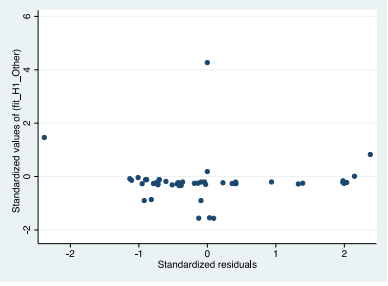


e. QQ plot of residuals from regression with dependent variable percofCash.

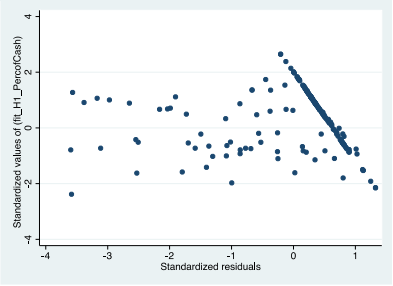


f. QQ plot of residuals from regression with dependent variable PercofStock.

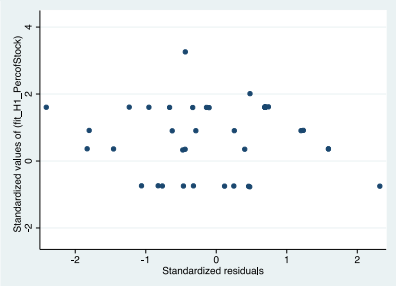
Figure 6: *Scatter plot of standardized residuals and fit of the OLS regressions*



d. From OLS regression with dependent variable PercofOther.



e. From OLS regression with dependent variable percofCash.



f. From OLS regression with dependent variable PercofStock.

Table 19: *Shapiro-Wilik Normality test by OLS regression.*

The sample contains all M&A deals announced between January the 1st 2005 and December 31th 2015 from database Thomson One. The acquisitions techniques recapitalization, self-tender, privatization, spinoff, and repurchase are excluded from the sample. All of the acquirers are located in the Netherlands, and are governmental, public, private or subsidiary type of acquirer and acquire a joint venture, private, publicly or subsidiary target. SMEs are defined by the definition of the EC. Acquirer is strategic, private equity is excluded. This model tests whether the estimated variance of the residuals from the regression are dependent on the values of the independent variables, thus whether the heteroscedasticity is accepted or not. If the null hypothesis is rejected, and indicating the disturbances are not normally distributed, heteroscedasticity-consistent estimators of variance in all models are used. The Shapiro-Wilk (1965) test will be conducted with the dependent variables: the percentage of stock payment, the percentage of cash payment, and other in consideration. Standard errors in parentheses | significance levels are *** p<0.01, ** p <0.05, * p <0.1. The Shapiro Wilk p-statistic is the p-value in the Shapiro-Wilik (1965) test. If the null hypothesis is rejected, the regression disturbances are not normally distributed and heteroscedasticity-consistent estimators of variance are used.

	(1)	(2)	(3)
Dependent variable:	PSP	PCP	POP
Independent variables:			
Constant	0.570**	0.668***	0.612***
	(0.228)	(0.122)	(0.162)
SME	0.311*	-0.024	-0.024
	(0.156)	(0.062)	(0.062)
Size	-0.001	0.011	0.011
	(0.031)	(0.007)	(0.007)
Reference = Government			
TPS = "Joint Venture"	0.435	-0.057	-
	(0.133)		(0.099)
TPS = "Public"	0.237*	0.073*	0.130
	(0.136)	(0.039)	(0.098)
TPS = "Subsidiary"	-	0.091**	0.148
		(0.038)	(0.098)
Reference = Government			
APS = "Investor"	-	-	-
APS = "Joint Venture"	-	0.126	0.126
		(0.235)	(0.235)
APS = "Private"	-		-0.430
			1.080
APS = "Public"	-	(0.086)	(0.086)
		0.106	0.106
APS = "Subsidiary"	-	0.143	0.143
		(0.126)	(0.126)
Reference = Friendly			
ATT = "Hostile"	-	-	-
ATT = "Neutral"	-0.317	0.043	0.043
	0.239	(0.063)	(0.063)
Observations	42.000	197.000	197.000
R-squared	0.354	0.096	0.096
adj. R-squared	0.243	(0.052)	(0.052)
F-statistic	3.191	2.195	2.195
p(F)	0.013	0.024	0.024
Heteroscedasticity acceted?	No	Yes	Yes
Heterosc Test: chi2(1)	0.372	22.269	22.269
Heterosc Test: P(chi2(1))	0.542	(0.000)	(0.000)
Corrected for heteroscedastic errors	No need	Not yet	Not yet
Shapiro-Wilik Normality Statistic	-0.534	8.033	8.043
Shapiro-Wilik p-statistic	0.703	(0.000)	(0.000)

Table 20: *OLS Regression, robustness check for hypothesis 1*

The sample contains all M&A deals announced between January the 1st 2005 and December 31th 2015 from database Thomson One. The acquisitions techniques recapitalization, self-tender, privatization, spinoff, and repurchase are excluded from the sample. All of the acquirers are located in the Netherlands, and are governmental, public, private or subsidiary type of acquirer and acquire a joint venture, private, publicly or subsidiary target. SMEs are defined by the definition of the EC. Acquirer is strategic, private equity is excluded. Regression results with the first difference of standardized dependent variables representing the different proxies for engagement rate in M&A activity. Independent variables include explanatory and control variables. Independent variables include 1 value as SMEs and 0 value for large enterprises. Robustness check is performed with the independent variables of micro, small, and medium enterprises as defined by the EC. Some control variables are dropped due to statistical insignificance. Standard errors in parentheses. Significance levels are
*** p<0.01, ** p<0.05, * p<0.1

	(2)	(4)	(6)	(8)
Dependent variable:	DV/Emp	DV/TT	DV/TA	NoD/TA
Independent variables:				
Micro	-0.661	-2.085	-4.745	158.617***
	(0.722)	(3.866)	(4.975)	(48.055)
Small	0.498	-3.106	4.447	80.028***
	(0.738)	(5.375)	(4.928)	(9.247)
Medium	0.310	7.687*	0.801*	21.507***
	(0.273)	(4.623)	(0.463)	(1.726)
APS = "Joint Venture"	0.001	-0.739	-0.626	6.116
	(0.330)	(8.081)	(0.554)	(6.538)
APS = "Private"	-	-	-	-
APS = "Public"	0.089	0.281	0.063	7.052
	(0.114)	(0.941)	(0.116)	(6.433)
APS = "Subsidiary"	-0.255	-1.999	-0.201	6.860
	(0.304)	(2.437)	(0.303)	(6.294)
TPS = "Joint Venture"	-	-	-	0.404
				(2.799)
TPS = "Private"	-0.676	-12.344	-1.205	2.573
	(0.639)	(12.395)	(1.262)	(3.050)
TPS = "Public"	-0.593	-11.517	-1.063	
	(0.642)	(12.249)	(1.248)	
TPS = "Subsidiary"	-0.428	-11.546	-1.290	0.220
	(0.624)	(12.267)	(1.256)	(2.966)
ATT = "Hostile"	-	-	-	-
ATT = "Neutral"	-0.096	-2.278	-0.303	-0.303
	(0.115)	(1.758)	(0.204)	(0.204)
TRE	0.082	0.076	0.007	-0.675
	(0.053)	(0.074)	(0.018)	(0.976)
Constant	0.483	11.531	1.160	0.066
	(0.617)	(11.865)	(1.216)	(0.078)
Year dummies	Yes	Yes	Yes	Yes
Robust standard errors	Yes	Yes	Yes	Yes
Observations	394	394	394	1167
R-squared	0.072	0.222	0.151	0.758
adj. R-squared	0.023	0.180	0.106	0.754
F-statistic	1.033	0.666	1.079	19.670
p(F)	0.422	0.860	0.369	0.000

Table 21: *logistic regression, robustness check for hypothesis 2*

The sample contains all M&A deals announced between January the 1st 2005 and December 31th 2015 from database Thomson One. The acquisitions techniques recapitalization, self-tender, privatization, spinoff, and repurchase are excluded from the sample. All of the acquirers are located in the Netherlands, and are governmental, public, private or subsidiary type of acquirer and acquire a joint venture, private, publicly or subsidiary target. SMEs are defined by the definition of the EC. Acquirer is strategic, private equity is excluded. Regression results with a dummy of dependent variable, representing the withdraw rate. Independent variables include explanatory and control variables. 1 value for SMEs and 0 value for large enterprises. Robustness check is performed with the independent variables of micro, small, and medium enterprises as defined by the EC. Standard errors in parentheses |significance levels are *** p<0.01, ** p <0.05, * p <0.1

Dependent variable:	Withdrawn deal dummy Model (2)
Independent variables:	
Small	-
Medium	(6.943)
	(26.720)
APS = "Joint Venture"	-
APS = "Private"	-
APS = "Public"	-
APS = "Subsidiary"	-
TPS = "Joint Venture"	-
TPS = "Private"	1.478
	(4.629)
TPS = "Public"	0.000
	(0.000)
TPS = "Subsidiary"	-
ATT = "Hostile"	-
ATT = "Neutral"	-
SIZE (log deal value)	2.952
	(2.859)
TRE	0.277
	(0.307)
PSP	1.225
	(0.209)
PCP	1.101
	(0.133)
Constant	.
	(.)
Observations	23
pseudo R2	0.428
Chi-statistic	8.928

Table 22: *OLS regression, robustness check for hypothesis 3*

The sample contains all M&A deals announced between January the 1st 2005 and December 31th 2015 from database Thomson One. The acquisitions techniques recapitalization, self-tender, privatization, spinoff, and repurchase are excluded from the sample. All of the acquirers are located in the Netherlands, and are governmental, public, private or subsidiary type of acquirer and acquire a joint venture, private, publicly or subsidiary target. SMEs are defined by the definition of the EC. Acquirer is strategic, private equity is excluded. OLS regression with dependent variables stock, cash, or other in consideration, as a means of payment. Independent variable enterprise size with 1 value are SMEs and 0 value for large enterprises. Standard errors in parentheses. Significance levels are *** p<0.01, ** p<0.05, * p<0.1

	(2)	(4)	(6)
Dependent variable:	Percofstock	Percofcash	Percofother
Independent variables:			
Micro	0.980	0.102	
	(1.430)	(0.147)	
Small	-0.512	0.098	-0.558
	(0.544)	(0.161)	(1.139)
Medium	0.242	0.217**	0.144
	(0.157)	(0.089)	(1.110)
APS = "Joint Venture"		0.302	
		(1.005)	
APS = "Private"	-	-	-
APS = "Public"		0.114*	0.049
		(0.069)	(0.173)
APS = "Subsidiary"		0.158*	0.353
TPS = "Joint Venture"			0.544
			(1.131)
TPS = "Private"	-0.755	-0.080	-0.198
	(0.626)	(0.177)	(1.097)
TPS = "Public"	-0.148	0.044	
	(0.626)	(0.174)	
TPS = "Subsidiary"	-0.618	0.060	-0.057
	(0.637)	(0.172)	(1.103)
ATT = "Hostile"	-	-	-
ATT = "Neutral"	-0.238	0.085*	
	(0.218)	(0.051)	
SIZE (log deal value)	-0.059**	-0.028***	-0.037
	(0.028)	(0.010)	(0.036)
TRE	-0.011	0.010	0.034
	(0.026)	(0.009)	(0.028)
Constant	1.399**	0.782***	0.598
	(0.649)	(0.188)	(1.110)
Year dummies	Yes	Yes	Yes
Robust standard errors	Yes	Yes	Yes
Observations	42	197	47
R-squared	0.632	0.224	0.455
adj. R-squared	0.372	0.131	0.105
F-statistic	4.733	1.987	0.000
p(F)	0.000	0.009	0.000