DIVESTING ASSETS AND REDEPLOYING RESOURCES AS PREDICTORS OF THE PERFORMANCE OF ACQUISITIONS: THE CASE OF GREECE

A Thesis submitted for the degree of Doctor of Philosophy

by

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Dedication

To my father and mother who have always been there for me and for their unconditional love...

Abstract

Post-crisis market realities in Greece are expected to lead to increased M&A activity in the coming years, little evidence is provided in the academic literature on Greek M&A post-acquisition performance and its driving factors. The overall aim of this thesis is to complement and enhance the existing M&A literature by examining the impact of two post-acquisition actions, of *asset divestiture* and *resource redeployment* on the long-term performance of Greek M&A deals over the period 2005-2009.

The conceptual framework of this thesis draws on the strategic management perspective. Using the *cost efficiencies* argument, the thesis examines how cost savings, due to asset divestiture affect the post-acquisition performance of both the target and the acquiring firm. In addition, by drawing on the resource-based view of the firm and the dynamic capabilities perspective, the thesis explores the effects of post-acquisition resource redeployment from acquirers to targets and *vice versa*, on revenue-enhancing capabilities.

The findings revealed that the divestiture of the acquirers' assets does not reduce costs. In addition, the importance of revenue-based synergies was shown, through the mediating variables of market coverage and innovation capabilities. Finally, acquirer's resource redeployment has a positive and significant effect on cost savings and the same holds true for the resource redeployment to the target. These results indicate that resource redeployment contributes in achieving higher cost efficiency.

The originality of this study is that it tries to obtain new insights on the subject of the post-acquisition performance using arguments from the cost-based and resource-based synergies, the resource-based view (RBV) of the firm and the dynamic capabilities perspective. In addition, this is a large-scale empirical study conducted in Greece drawing on detailed primary data on a high range of post-acquisition actions followed by the managers of the acquiring companies rather than secondary data.

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1. Introduction

1.1. Introduction

Mergers and acquisitions (M&A, hereafter) have been a widely employed method for corporate expansion and restructuring (Porter, 1987; Maksimovic et. al, 2011). Expansion through M&A offers considerable advantages compared with *internal* or organic growth. The most important sources of value creation through M&A are through a) increases in market power and market share (Anand and Singh, 1997; Hayward, 2002), redeployment and leveraging of marketing resources (Capron and Hulland, 1999; Srivastava et al., 2001), capabilities and network externalities (Hoopes et al., 2003; Shapiro, 1989), b) cost savings, via the reduction of excess capacity (Helfat and Eisenhardt, 2004) and exploitation of scale, scope (Witteloostuijn and Boone, 2006) and learning economies (Hayward, 2002) and, c) increased growth opportunities linked to the creation of new business models as well as the development of capabilities (Eisenhardt and Martin, 2000; Lockett et al., 2009), resources, products and processes (Meyer, 2001; Sudarsanam, 2010). Other sources of value creation are also discussed in the literature. Some of these are increased efficiency and productivity, reduction in the cost of capital, managerial discipline and, better allocation of resources through effective internal markets (Stein, 1997). Of course not all M&As create or enhance value. Theories for nonvalue maximising reason for M&As exist as well. Such theories include managerial hubris, managerial discretion and managerial entrenchment (Amihud and Lev, 1981; Jensen, 1986; Malmendier and Tate, 2008).

The popularity of M&A is apparent when one considers that such activity has reached record levels in the last ten years leading to the 2007-2009 financial crisis. During this period, the global economy has witnessed its latest wave of M&A activity, with deals reaching a total value of approximately \$5.5 trillion. As expected, the most recent rise in M&A activity coincided with a similar trend in global stock market activity.

In Greece M&A activity was lagging behind due to the existence of a heavily regulated environment, consisting of many state-controlled banks, regulated interest rates, credit rules, and restrictions in the movement of capital (Pagoulatos and

Triantopoulos, 2009). The first wave of M&A deals in Greece took place during the period 1997-2000, triggered by a combination of financial system reforms in the second half of the 1990s and a buoyant stock market.

In spite of the collapse of Lehman Brothers and the subsequent eruption of the global financial crisis of 2007-2009, the Greek banking sector proved to be somewhat resilient. This can be mainly attributed to its traditionalist operations, its relatively small exposure to "toxic" assets and its marginal integration into the European Union's (EU) financial markets, compared to other countries within the EU (Pagoulatos and Triantopoulos, 2009). It was not until late 2009, when the shockwaves of the 2007-2009 crisis affected Greece that was economically vulnerable due to chronic problems such as low competitiveness, trade and investment imbalances and fiscal mismanagement (Featherstone, 2011).

As a result of the Greek sovereign debt crisis, the Greek banking system suffered from a massive outflow of deposits – following speculation regarding Greece's exit from the Euro zone, with more than 25 billion Euros being withdrawn since 2012 (Halkos and Tzeremes, 2013). This, in turn, led to a massive liquidity shortage in the interbank market that subsequently spread to other aspects of the economy, such as housing and consumer lending, the shipping industry, small and medium-size enterprises (SMEs), tourism and the agricultural sector (Pagoulatos and Triantopoulos, 2009). In addition, the productivity of the manufacturing sector shrunk by 9% in 2007-2008 (National Statistical Service of Greece, 2009).

Both the financial crisis of 2007-2009 and the Greek sovereign debt crisis have refuelled the long-standing debate on the inefficiencies of the Greek public and private sectors. As far as the private sector is concerned, these inefficiencies mainly stem from the incumbent firms' inability to compete at the international level. This is primarily due to the fact that the sector comprises a large number of medium-sized companies, which do not possess the scale required to succeed in the current competitive environment – within and/or outside the Euro zone. It is well accepted that one of the main steps in the restructuring of the private sector involves the reduction in the large number of these companies through M&A. It is anticipated that successful M&As will lead to the creation of a stronger private sector, thus enabling companies to acclimatize and thrive within and across national borders.

The typical question raised in the academic literature is whether M&As add value to the organization, thus increasing shareholder wealth. The extant literature offers both theoretical and empirical contributions, attempting to address this issue from a number of perspectives, namely the financial/economic, strategic management, organisational behaviour, and process perspective (Birkinshaw *et al*, 2000). Those perspectives are discussed in more detail in the following section.

On the one hand, a number of studies have (consistently) shown that the returns for the shareholders of the acquiring firms have been small and in some cases negative (Jensen and Ruback, 1983; Jarrell *et al.*, 1988; Copeland, *et al.*, 2000). Similarly, "value-destroying", results have been documented in studies examining Greek M&As. For instance, in an examination of M&A activity in the first merger wave of 1997-2000, Papadakis (2002) found that 59% of the firms involved experienced a reduction in the return on capital employed, two years after the conclusion of the deal. In addition, only 40% of the deals were reported as being successful. Thus, despite their apparent popularity, a large portion of M&As have failed to create value (Hatch *et al.*, 2004; Christofferson *et al.*, 2004). On the other hand, little evidence on Greek M&As is offered in the Strategic Management or any other literature.

One may argue that the M&A phenomenon in Greece is still in its infancy – when compared to the respective M&A activity in the country's developed counterparts within and outside the Euro zone. Despite the fact post-crisis market realities in Greece are expected to lead to increased M&A activity in the coming years, little evidence is provided in the academic literature on Greek M&A post-acquisition performance and its driving factors. Therefore, Greece represents a fertile ground for research on this front. This is somewhat in line with the existing contributions on Greek M&As (see Section 2.9.5) that concur that further research on Greece is deemed necessary (Featherstone 2011).

In general, the above serve as the motivation for this thesis, which seeks to address the issue of the impact of two post-acquisition actions, namely, asset divestiture and resource redeployment on the long-term performance of Greek acquisition deals. Nonetheless, before expanding on the theoretical framework and motivation and the research aims and objectives of this thesis in the following sections, it is important to look into the evolution of M&As.

1.2. M&A Activity

1.2.1. Worldwide Merger Activity

Worldwide M&A activity reached in 2010 almost US\$3 trillion, down from US\$5.5 trillion back in 2007 (Fig. 1-1); these raw data clearly point to the adverse effects of the recent financial crisis on this type of activity. Figure 1.1 also reveals two "waves" of M&A activity, since the early 1990s. For instance, one wave spanning the period 1992-2000 can be discerned (effectively it ended when the "dot.com" bubble burst), and another one starting from 2002 and lasting up to 2007, when the credit crunch took its toll in the financial transactions activity, including M&A deals.



Figure 1.1: Worldwide Mergers and Acquisitions

Source: Institute of Mergers, Acquisitions and Alliances (2010)

Going further in the past, Table 1.1 shows the major M&A waves since the late 1800s. The first merger wave occurred at the turn of the 20th century and primarily involved horizontal mergers, while the second occurred in the 1920s and involved vertical mergers. During the third merger wave (1965–1969), merger activity increased dramatically, with a lot of M&A deals involving more diverse companies, as acquirers bought into different industries. In the fourth wave (1981–1989) (which involved mainly US deals) acquiring companies became more hostile with the

targets, with the latter in many cases being larger than the former. Again during this period, the activity was intense with a lot of horizontal deals.

The fifth merger wave (1992-2000) was characterized by mega-deals and a buoyant stock market, which "*emboldened companies and pressured them to do deals to maintain heady trading multiples*" (Lipton, 2006). Indeed, the largest deals did occur in that wave. Further, Europe and Asia started experiencing an increasing number of deals. Finally, during the last merger wave, which took place over the period 2003-2007, there was quite steep rise in M&A activity, creating the greatest merger wave in the history of M&A.

Period	Name	Facet
1897–1904	First Wave	Horizontal mergers
1916–1929	Second Wave	Vertical mergers
1965–1969	Third Wave	Diversified conglomerate mergers
1981–1989	Fourth Wave	Congeneric mergers; Hostile takeovers; Corporate Raiding
1992–2000	Fifth Wave	Cross-border mergers
2003–2008	Sixth Wave	Shareholder Activism, Private Equity, LBO

Table 1.1: Waves in M&A Activities Source: Lipton (2006)

1.2.2. Greek M&A Activity

The first "wave" of M&A activity in Greece took place during the 1997-1999 period, as domestic companies (mostly listed companies in the Athens Stock Exchange) attempted to adapt more efficiently in the globalized money and capital markets and in the world markets for goods and services. In the Greek financial sector the M&A activity started picking up in 1995 and culminated in 2001.

Following Greece's adoption of the euro in 2001, Greek interest rates started to decline, thereby increasing competition among the Greek financial institutions. As a result, the value of M&A activity started picking up. More particularly, the total value of transactions reached **€2.5bn** in 2002 (with 308 transactions), **€4.3bn** in 2005 (with 217 transactions) (Pricewaterhouse Coopers, 2006), and in 2007, the value of the Greek M&A deals climbed to **€8 bn**. Subsequently, the number and the volume of mergers and acquisitions (M&A) in Greece declined considerably reaching **€7bn** in 2008 (with 153 transactions) and **€4 bn** in 2009 (with 102 transactions) (Center for Economic Research, 2010).

The majority of acquiring companies involved large companies, whose turnover exceeded €50m. (Pricewaterhouse Coopers, 2005).

Then, the majority of the M&A deals concentrated in two sectors: the *finance* and the *technology and telecommunications* sector. For instance, in 2004 the aforementioned sectors accounted for up to 44% of the total value of M&A transactions that took place in 2004 (Pricewaterhouse Coopers, 2005). Over the period 1999-2009 the Greek finance sector accounted for almost one quarter of the M&A transactions conducted (Center for Economic Research, 2010). Indeed, in the wake of Greece joining the euro the Greek banks realized that their size was too small for operation in an integrated European banking market.

1.2.3. An Overview of the evidence from Greece

Looking into past research studies that involve post-acquisition performance of M&As in Greece, the results apart from a few cases reveal a negative impact on post-acquisition performance. In addition, the approaches used in the majority of those studies involve accounting-based measures and marked data (event studies) to look into abnormal returns on the stock prices of the merging companies.

In an early study of M&As in Greece, Katsos and Lekakis (1991) found that small to medium firms merge only with similar sized firms and that firms tried to combine capital assets and marketing networks. Mylonidis & Kelnikola (2005) in their study of post-merger performance looking into pre versus post-merger accounting ratio comparisons from five bank-deals in Greece found a positive impact on post-merger performance. Papasyriopoulos *et al.*, (2007), used an event study methodology to look into abnormal returns on stock prices on the day of acquisition announcements.

They found that "good news" has a positive effect on abnormal returns and "bad news" a marginal negative one.

Furthermore, in a study looking into the operating performance of fifty Greek conglomerate and non-conglomerate mergers, Eleftheriades *et al.*, (2008) found that conglomerate mergers prevailed as more successful in liquidity and viability financial ratios. Rezitis, (2008), examining the effect of acquisition activity on the efficiency and total factor productivity of Greek banks showed that the effects are negative.

Recent studies have shifted more focus on post-acquisition performance. Papadakis and Thanos, (2010), investigated corporate acquisition performance based on a sample of fifty domestic Greek acquisitions. Their results revealed failure rates of M&As that ranged from 50% to 60%. Pazarkis et al., (2011), investigated the postacquisition operating performance of acquisition-involved firms in Greece at information technology industry, a knowledge-intensive industry. Their results showed a negative impact on post- acquisition performance regarding firms from a knowledge-intensive industry and no changes on any other examined ratios. Agorastos et al., (2011) examined the impact of the post-merger operating performance of Greek firms at domestic and cross-border transactions using accounting data. They found that cross-border M&As stipulate a better post-merger performance for the acquirer than the domestic ones. Alexandrakis et al. (2012) studied the impact of mergers and acquisitions (M&As) on the post-merger operating performance of merger-involved firms at industrial goods and services sector of the ASE (Athens Stock Exchange) in Greece. The results revealed that M&As had a negative impact on the post-merger performance of the merged firms. Finally, Pazarkis et al., 2013, examined the impact of M&As on the post-acquisition performance of Greek-merger involved firms by looking into the two profitability ratios (ROA and ROE). Their results revealed that there is no significant change of any variable under investigation for the two profitability ratios and they concluded that M&As within the Greek sample do not lead to enhanced economic profitability.

1.3. Theoretical Framework and Motivation

A large body of research has focused on the motives behind M&A activity. Four different research streams, originating from distinct theoretical backgrounds and hypotheses, have been witnessed in the literature (Birkinshaw *et al*, 2000). As Table 1.2 shows, these streams are the following: financial/economic, strategic management, organisational behaviour, and process perspectives.

Research stream	Objective function	Theoretical underpinnings	Central propositions for each theoretical perspective
Financial/Economic	To Maximize Shareholders Wealth	Market for corporate control; free cash flow; agency theory; efficient market hypothesis (EMH) (Jensen, 1987; Manne, 1965)	Acquisitions enhance the efficiency of the market for corporate control and thus result in net wealth creation for shareholders
Strategic Management	Performance of acquiring/target firms	Industrial organization economics (Lubatkin, 1983; Scherer and Ross, 1990) Resource based View (RBV) of the firm (Barney, 1988)	Synergies (as a result of economies of scale and scope, and increased market power etc.) will have a positive impact on performance Only synergies (to the bidder- target pair) or unexpected synergies will have a positive impact on performance
Organizational Behaviour	Impact of acquisition on individuals and organization culture	Acculturation theory (Berry, 1984; Nahavandi and Malekzadeh, 1988)	The congruence between the cultures of the two merged organizations will facilitate employee satisfaction and effective integration
Process Perspective	Creation of Value after acquisition	Behavioral theory of the firm (Cyert and March, 1963; Jemison and Sitkin, 1986a, a986b)	The actions of management, and the process of integration, determines the extent to which the potential benefits of the acquisition are realized

Table 1.2: Summary of Streams on M&A Research

(adopted from Birkinshaw et al, 2000)

The main focus of the **financial-economic perspective** has been on the effect of the acquisition on *shareholder wealth*. This research stream uses the "event-study" methodology to examine the effects of an acquisition. In the M&A literature, an *event* is considered the date when a formal announcement on the deal is made. Specifically, the date when investors become aware of the upcoming deal is

designated (i.e. the date when the event takes place) as t = 0. Then, depending on the influence of the event, we examine a total of M days before and after the date of occurrence of the event; this is the size of the *event window*.

In general, the majority of theoretical and empirical contributions pertinent to this category or M&A research, demonstrate a transfer of wealth from acquirers to targets. In some of the earliest studies (Jarrell *et al*, 1988; Jensen and Ruback, 1983), it was shown that real positive gains accrue to the shareholders of the acquired, but not the acquiring firm. For instance, Jarrell *et al.* (1988) in their study found that excess returns on acquiring firms' share price around the announcement of takeover dropped from an average 4.95% in the 1960s, to 2% in the 1970s, and to -1% in the 1980s. In the Greek case, a widely-cited paper by Protopapas *et al.* (2003) examined the stock price reaction in 72 M&A deals, over the period 1988-1997; the authors found that M&A activity can land the shareholders with statistically significant abnormal returns of both the acquiring and target company.

The second research stream, which deals with the **strategic management perspective**, has concentrated at the level of the individual company and, more specifically, at industrial organization (IO) economics. The latter are based on **cost efficiencies** due to *economies of scale* and *scope*, which can be accomplished through acquisition activity and the ensuing *asset divestiture*. Indeed, evidence shows that achieving the aforementioned goals, through M&As, may result in superior performance for the acquiring firm (Scherer and Ross, 1990; Chatterjee, 1986; Lubatkin, 1983; Singh and Montgomery, 1987; Capron 1999).

In addition, the underlying perspective in this research stream of research is the *Resource Based View* (RBV) of the firm, originally associated with Penrose (1959). More specifically, Penrose (1959) asserted that in order for resources to be useful and to contribute to a firm's competitive edge, they not only have to be utilised but new ways must be found for utilizing the existing resources. Essentially, the RBV puts forward the conditions under which the resources of a firm can offer a competitive advantage (Barney, 1991). And should these conditions be met when undertaking an M&A deal, then such an investment activity could lead to superior performance, through revenue enhancement. Two ways of boosting revenues

(through access to the resources target) are (a) the increased *market coverage*, and (b) *enhanced innovation capability* (Capron 1999).

The third stream of research has delved into **organizational behaviour**, and specifically it has concentrated on the behavioural implications of acquisitions, at both the individual and organizational levels. The main conclusion from this strand of research is that long-term success can only be attained through process management, effective communication and sensitivity to the concerns and expectations of individuals on both sides of the acquisitions (Bastien, 1987; Blake and Mouton, 1985; Buono and Bowditch, 1989; Cartwright and Cooper, 1993; Mirvis and Marks, 1991; Sakes and Mirvis, 1984). This perspective contends that firms frequently use acquisitions to reconfigure the acquiring or target (i.e. acquired) businesses as a piece of the procedure of broader strategic change (Bowman and Singh, 1993; Seth, 1990b).

The fourth research stream, that of **process perspective**, has concentrated on the actions adopted by management aimed at steering the post-acquisition process. Here, it is argued that strategic and organizational fit offer the potential for synergies, although their realization relies on the ability of management to handle the post-acquisition process in an effective manner (Greenwood and Hinings 1994; Haspeslagh and Jemison, 1989, 1991; Howell, 1970; Hunt, 1990; Jemison and Sitkin, 1986a, 1986b; Kitching, 1967).

Theories attempting to account for the "value-destroying" effect of acquisitions fall into three categories. The first category is associated with Roll (1986) and is the theory of managerial hubris. The second category associated with Jensen (1986) and is the theory of managerial discretion. Finally, the third category is associated with the theory of managerial entrenchment (Shleifer and Vishny, 1989). The theories in the first two categories account for the underlying reasons that managers of the acquiring firm make unintentionally bad investment decisions, while the third category explains why managers make intentionally poor capital budgeting decisions.

As far as the underlying theoretical justification for the acquisition activity, the **Resource Based View** (RBV) of the firm, one of the most widely recognised

theoretical points of view in the field of strategic management (Powell, 2001; Priem and Butler, 2001; and Rouse and Daellenbach, 2002), seems to offer a plausible explanation. According to this theory, a company's resources create the conditions under which the resources of a firm can achieve a competitive advantage relative to its peers (Barney, 1991). And the "easiest" way to take control of "superior" resources, in the absence of an efficient resource market, is to acquire another firm.

The conceptual framework of this thesis draws on the second research stream in the M&A literature, namely the strategic management perspective. Specifically, using the *cost efficiencies* argument, the thesis examines how cost savings, due to asset divestiture (following an M&A transaction), affect the post-acquisition performance of both the target and the acquiring firm. In addition, by drawing on the resource-based view of the firm and the dynamic capabilities perspective, the thesis explores the effects of post-acquisition resource redeployment from acquirers to targets and *vice versa*, on revenue-enhancing capabilities. Finally, the thesis examines the interplay between asset divestiture and resource redeployment.

1.4. Research Aims and Objectives

First, the overall aim of this thesis will be to complement and enhance the existing M&A literature by examining the impact of two post-acquisition actions (normally followed by the managers of the acquiring firms), of *asset divestiture* and *resource redeployment* on the long-term performance of Greek M&A deals over the period 2005-2009.

Second, the acquisition's long-term performance will be measured by **self-reported measures** of changes in market shares, sales, intrinsic profitability, and relative (to the industry's) corporate profitability. The population of the sample consists of acquisitions from Greek companies operating in the same or different industries. The period of 2005-2009 was chosen, in order to exclude a) recent acquisitions where post acquisition restructuring had not yet led to asset divestiture or resource redeployment and b) older acquisitions for which managerial turnover would make it difficult to gather detailed information about post-acquisition activities. In this study the population frame was chosen so as to satisfy the following criteria. First, the organisation should operate in Greece. Second, the acquisition should have been

completed. Third, a member of the top management team should be easily identifiable (i.e. position in the company, email). Fourth, acquisitions where the percentage of the target's assets/stock that was acquired was less than 100% were excluded. Sources for information included the Athens Stock Exchange, the Greek Ministry of Regional Development and Competitiveness, ICAP Group, and Thomson Financials.

Third, a review of the M&A literature will be conducted. In doing so, various ways of classification of acquisitions will be examined. Due to the vast number of different theoretical approaches dealing with the underlying motives of M&As on the one hand a review of the theoretical foundation of the economic theories (neo-classical) and types of synergies, reduction of risk and diversification and increase in market power will be investigated. On the other hand, a review of the non-economic motives of acquisitions will be analysed, that is the managerial theories and organisational behaviour. Also, the basic tenets of the resource based view of the firm will be presented along with a critical review of assumptions and limitations. Then, the dynamic capability perspective is considered as an extension of the RBV in that their assumptions are similar. It will be argued that that the dynamic capability view can be considered as an extension of the RBV thinking. Measures of evaluating postacquisition performance will be presented as well. To end the literature review, evidence of previous studies of post-acquisition performance along with evidence from Greece will be provided. Therefore arguments from both economic and noneconomic motives, the RBV and the dynamic capabilities perspective are critically used to create assumption and hypotheses to be tested on the empirical part of the thesis.

Fourth, the analysis will be performed using a *Structural Equation Modelling Approach*, which is a multivariate technique that is described as a combination of both factor analysis and path analysis and facilitates the examination of the structure of interrelationships expressed in a series of equations, similar to a series of multiple regression equations. These equations depict all of the relationships among constructs (the dependent and independent variables) involved in the analysis. In particular, the thesis builds on the methods of analysis used by *Capron* (1999) as well as by subsequent reviewers and authors (Capron *et al.*, 1998; Capron and

Hulland, 1999; Capron, *et al.*, 2001; Capron and Pistre, 2002; Maksimovic *et al.*, 2011) and extends existing empirical evidence by examining the impact of post-acquisition asset divestiture and resource redeployment on the post-acquisition performance.

Fifth, the thesis will examine the effect of the *post-acquisition measures* taken by the management of the acquiring firm, in terms of *resource redeployment* and *asset* divestiture, on the post-acquisition performance of the merged firms. Resource redeployment and asset divestiture are assumed to influence post-acquisition (longrun) performance, of the merged firms through two mediating variables, i.e. cost savings and revenue enhancing capabilities). On the one hand, cost-efficiency theories focus on cost savings resulting from an acquisition. In turn, these cost savings are achieved through asset divestiture. Asset divestiture refers to the extent to which the acquiring firm eliminates its own or the target's physical assets (Capron et al. 2001). Thus asset divestiture may refer to the extent to which merging firms eliminate their physical assets, dispose of inefficient management (and management practices) and cut back their personnel in different areas, such as R&D, manufacturing, logistics, sales networks, and administrative services (Anand and Singh 1997; Andrade and Stafford, 2004; Krishnan et al., 2007; Maksimovic et al., 2011). On the other hand, using arguments from the resource-based view (RBV) of the firm the role of **resource redeployment** in enhancing the revenues of the merged firm will be emphasized. Also, by using arguments inherent in the dynamic capabilities, the thesis will try to provide evidence that sustaining long-term competitive advantage lies in the recombination of assets and resources, that is resource reconfiguration (Eisenhardt and Martin, 2000; Bowman and Ambrosini, 2003; Abrosini and Bowman, 2009). Resource redeployment refers to the extent to which a target or an acquiring firm uses the other firm's resources, such as R&D capabilities, manufacturing know-how, marketing resources, supplier relationships, and distribution expertise (Capron, 1999, Capron et al., 2001; Gary, 2005). As such, the redeployment of assets may involve physical transfer of resources to new locations or sharing resources without physical transfer. Resource redeployment can enhance revenue, either by increasing market coverage (though geographical extension of the market and product line expansion) or by improving *innovation* capabilities.

Sixth, in this thesis, aside from investigating the direct effects on the mediating variables, asset divestiture and resource redeployment the **indirect**, or **cross effects** on these variables will be examined as well. For instance, asset divestiture commonly implies changes in organisational, technological or marketing resources to produce and sell greater volumes of goods more efficiently. Hence, asset divestiture can be linked to revenue enhancement as well. At the same time, the process of redeploying resources tends to create redundancies and conflicts with existing resources. The firm then tends to sell excess physical assets, shut excess facilities, and lay off surplus employees. Thus, resource redeployment may be linked to cost-savings. In addition to looking at the direct and indirect effects the thesis will examines how the aforementioned direct and indirect effects of *asset divestiture* and *resource redeployment* are modified in the presence of certain control variables.

1.5. Main Findings and Contribution

This thesis will attempt to make contributions at a theoretical level, conceptualisation and measurement level and methodology and can be a useful tool for managers and provide a guideline for academics.

1.5.1. Contribution to the Literature

This thesis will attempt to contribute to the debate on the effectiveness of M&A activity in several ways.

In the strategic management literature, US and UK M&As have been extensively investigated. On the contrary, only a small number of studies that look into this phenomenon in other countries exist. This statement appears even more valid when the focus is shifted towards post-acquisition performance examined by accounting data and event based studies with stock returns. Therefore, this research effort emerges as even more "unique" as the post-acquisition performance is investigated using arguments of cost-based and resource-based synergies, the resource-based view (RBV) of the firm, the dynamic capabilities perspective employing primary data of subjective measures obtained from the managers of the acquiring firms. Thus, it is that scarcity of research of asset divestiture and resource redeployment as predictors of post-acquisition performance in Greece that motivated the author to examine those phenomena. First, this is (to the best of the author's knowledge) the first large-scale empirical study conducted in Greece drawing on detailed primary data on a high range of post-acquisition actions followed by the managers of the acquiring companies rather than secondary data.

Second, the majority of the literature employing cost-based and resource based arguments to examine post-acquisition performance only looked into horizontal acquisitions (Anand and Singh, 1997; Capron *et al.*, 1998; Capron, 1999; Capron and Mitchell, 2001; Krishnan *et al.*, 2004; Moliterno and Wiersema, 2007). This thesis contributed to the literature by examining both horizontal and conglomerate acquisitions.

Third, this thesis extends the existing body of research by including new control variables; namely the payment method, acquisition classification, acquisition type, business relatedness, organisational changes, the number of top executives made redundant. At the same time, the thesis controls for established control variables such as the relative size and geographic scope.

Fourth, at the conceptualisation and measurement level, this thesis contributes to the debate on whether and to what extent post-acquisition performance in Greek M&A deals is influenced by asset divestiture (and hence cost savings) and resource redeployment (and hence improved revenues). Therefore a set of measures is created that tries to encapsulate this vast range of post-acquisition actions. It is possible that this procedure can further improve empirical tests to better understand the capability of acquisitions to create value.

Fifth, by looking into a large spectrum of differentiated post-acquisition actions that incur in various types of acquisitions this thesis adds to the debate of on the relationship between relatedness and acquisition performance.

Sixth, this thesis progresses the discussion of whether organisational changes have an effect on the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.

Seventh, by looking into different payment methods the thesis examined the effects of cost based synergies and resource enhancement capabilities with post-acquisition performance.

1.5.2. Managerial Contribution

The empirical analysis of this thesis reveals a number of important findings. To begin with, it was found that divestiture of the acquirer's assets has a negative impact on cost savings, while the divestiture of the target's assets (which is eight to twentyeight times more likely to occur than the divestiture of the acquirer's assets) does lead to cost reductions. Then, cost savings were found to have a negative effect on postacquisition performance; presumably this effect is due to the fact that the negative effects of the acquiring firm's divestiture on cost savings outweigh the positive effects of the target asset's divestiture. This has significant policy implications for managers who wish to present to their shareholders a case for acquiring a target firm.

Market coverage and innovation capabilities were shown to positively affect postacquisition performance. Resource redeployment from acquirers to targets not only improves revenue-enhancing capabilities (market coverage and innovation) but also reduces costs. Resources redeployment from targets to acquirers also improves revenue-enhancing capabilities and reduces costs.

In addition, when further potential cross-effects were considered, it was found that resource redeployment's effect on cost savings has a positive and significant effect on both the acquirer's and target's resource redeployment.

1.5.3. Contribution to academia

This is the first time in the field of Greek M&As that the *strategic management perspective* is applied to explore the effects of post-acquisition performance that the author is aware of. The overwhelming majority of studies in this area (i.e. in the field of Greek M&As) using the *financial-economic perspective* (see Table 1-2) has focused on the effect of the acquisition on *shareholder wealth*. Hence this study fills a major research gap in the literature of Greece-originated M&As.

The overwhelming majority of studies on the post-acquisition effect of M&As have relied either on share price reaction (Alexandrakis, *et al.* 2012) or on accounting

measures, such as the return on assets (ROA) (Bertrand and Betschinger, 2011). So, this thesis by using *subjective measures* of performance, i.e. the managers' *self-reported opinions* on how the company fared after the deal, covers a major research gap, at least, as far as the Greek case is concerned.

1.6. Outline of the Thesis

The thesis is divided into nine chapters. Following the introduction (Chapter 1) Chapter 2 presents the literature on resource-based theory, resource redeployment and asset divestiture. Definitions and classification of M&As are presented along with economic and non-economic theories related to acquisition motives. Also, the acquisition premium, cost and method of payment are presented, in conjunction with the choice of financing the acquisition. Moreover, strategic management motives of an M&A are discussed while issues related to the evaluation and evidence of post-acquisition performance are discussed.

Chapter 3 discusses the thesis' theoretical framework and research questions. Therefore, the methodology and the empirical approach are set as foundations to examine the conceptual model of the thesis.

Chapter 4 addresses issues relating to the theoretical foundations of business research, the design of the study and the data collection process, and the methods of analysis used to scrutinise the collected data.

Chapter 5 reports certain descriptive statistics concerning, among other things, the extent and direction of post-acquisition asset divestiture and resource redeployment.

Chapter 6 presents the factor and correlation analysis to derive meaningful factors form the data obtained from the questionnaires.

Chapter 7 presents the empirical results of fitting a Structural Equation Model (SEM) to our data; the model examines the dependence relationships between the exogenous (Post-acquisition performance, Value) and endogenous variables (Target and Acquirer Asset Divestiture, Target and Acquirer Resource Redeployment, Organisational Changes) simultaneously.

Chapter 8 reviews the research findings. Also, different types of research contributions are presented as well as the research limitations and directions for further research.

Finally, Chapter 9 contains the references and the Appendices of the thesis.

2. Literature review

2.1. Introduction

This chapter offers a systematic review of the theoretical and empirical contributions on the aspects of M&A pertinent to the aims and objectives of this thesis. In particular, Section 2.2 offers a brief discussion on the definition and classification of acquisitions. This is followed by an analysis of the economic and non-economic theories with regards to the underlying motives of M&As which is provided in the next two sections. Specifically, Section 2.3 presents the neoclassical approach, while Section 2.4 provides a brief overview of the non-economic theories on M&A. Section 2.5 examines the contributions from the strategic management approach with regards to the motives behind an M&A. This approach is expressed through the *Resource* Based View (RBV) Theory, which places a special emphasis on the quantity and quality of resources that a firm controls, in order to gain a competitive advantage over its competitors. Section 2.6 examines the dynamic capabilities perspective and their role on the firm's existing resource base in order to sustain or even enhance its competitive advantage Section 2.7 examines the literature on the cost of M&As, the resulting premium, and the method of payment. Section 2.8 discusses the theoretical contributions on post-acquisition performance, while, Section 2.9 presents the respective empirical evidence. Finally, Section 2.10 provides a summary of the literature and sets the foundations for the research questions of this study.

2.2. Classification of Acquisitions

There are various ways to classify acquisitions. One is according to their form; (a) merger or consolidation (b) acquisition of stock and (c) acquisition of assets. Other ways to classify acquisitions involve distinguishing them according to their type into *friendly* vs. *hostile, domestic* vs. *cross-border*, and/or classifying them according to the relatedness in the lines of business of the merging firms.

2.2.1. Classification of Acquisitions According to their Form

In an **acquisition**, there are three procedures that one firm can utilise in order to acquire another firm, those involve a *merger*, or *acquisition of stock* (with a tender offer for the voting stock), or *purchase of assets*.

In an **acquisition of stock**, the acquiring firm usually makes a **tender offer**, i.e. a public offer to purchase (at a certain price and at a certain date) the *voting stock* of the target firm (Loughran and Vijh, 1997; Bhagat *et al.*, 2005). Often, the offer is made directly to the shareholders of the target firm, in order to bypass the hostility of the target's management. The tender offer is communicated to the target firm's shareholders via public announcements. Those shareholders who choose to accept the offer tender their shares by exchanging them for cash or securities (or both), depending on the offer. A tender offer is frequently contingent on the bidder's obtaining some percentage of the total voting shares. If not enough shares are tendered, then the offer might be withdrawn or reformulated.

In an **acquisition of assets**, the firm can effectively acquire another firm by buying most or all of its assets (Lee and Madhavan, 2010). This has a similar effect to buying the company. In this case, however, the target firm will not necessarily cease to exist; it will have just sold off its assets. The "shell" will continue to exist unless its stockholders choose to dissolve it. This type of acquisition requires a formal vote of the shareholders of the selling firm. One advantage to this approach is that there is no problem with minority shareholders holding out. However, acquisition of assets may involve transferring titles to individual assets. The legal process of transferring assets can be costly.

Acquisitions may also take the form of a **merger**, which can be of two types. The first involves the **absorption** of one firm by another, where the acquiring firm retains its identity while the acquired (or target) firm ceases to exist (Vermeulen and Barkema, 2001). The second type involves a **consolidation** of two (or more) companies into a single new company (Ross *et al.*, 2002).

Furthermore, another way of looking into acquisitions is as a type of **takeover**, which, in general, refers to the transfer of **control** (i.e. to have majority vote on the board of directors) from the shareholders of one firm (the **target firm**) to another, i.e. the shareholders of the **bidding firm** (Jensen and Ruback, 1983). A takeover may occur in the following three ways: (a) *acquisition*; (b) a *proxy contest* and (c) a *going-private transaction* (Fig. 2.1).

In a **proxy contest**, dissident shareholders seek proxies from existing shareholders to gain control of the board of directors.

In a **going-private transaction**, a small group of investors purchases all of the firm's outstanding common stock, and the firm is then delisted. When such deals are financed by debt (of an amount greater than 70%), going-private transactions are known as **leveraged buyouts (LBOs)** (Lee and Madhavan, 2010), while, if the group of investors, which buys the firm's common stock, comes from the firm's management, then this type of acquisition activity is known as **management buyout** (**MBO**) (Campa and Hernando, 2004).



Figure 2.1: Classification of Takeovers Source: adapted from Ross *et al.* (2009:824)

For ease of exposition, the general term "**merger**" shall be used throughout this thesis to refer to both forms of reorganization (absorption and consolidation). In addition, the term "mergers and acquisitions (M&A)" shall be used to refer in general to the broader issue of acquisitions.

2.2.2. Friendly and Hostile Acquisitions

M&As can be also classified in accordance to their stance as friendly vs. hostile; toward the management of the target company (Sudarsanam, and Mahate, 2006). On the one hand, a **friendly takeover**, is one where the target's management "welcomes" the bidder, and urges the board of directors and shareholders to accept

the offer. On the other hand, a **hostile takeover** is one where the management of the target company opposes the deal and encourages the shareholders to do the same (Armour *et al.*, 2011). Usually such acquisitions are carried out by a *tender offer*, where the bidder makes an offer directly to shareholders of the target firm (in this way bypassing the management of the target) – to purchase the shares of the latter at a price significantly higher than the market. Frequently, however, in a tender offer, a significant minority of shareholders will hold out, and the target firm cannot be completely absorbed; such situation may delay the realization of any merger benefits or may be add costs.

In some early studies on takeovers (Jensen, 1988 and Weisbach, 1993) it was suggested that managerial hostility (on the part of the target firm) towards an acquisition was likely to be motivated by managerial self-interest. In particular, it was suggested that under-performing managers (of the target company) were those more likely to resist a bid, as well as more likely to be replaced following a successful bid (O'Sullivan and Wong, 2005). As a result, hostile takeovers were viewed as a disciplinary device for target companies, whose top management had failed to meet the standard shareholder objectives (Tuch and Sullivan, 2007).

It seems that the relevance of hostile bids has decreased over time, as friendly acquisitions tend to be greater in number. In a study conducted by Andrade *et al.* (2001) on a total of 4,300 US acquisitions that took place in the period 1973-1998, it was found that hostile bids at any point fell from 14.3% of all cases in 1980-1989 to just 4% in the period 1990-1998.

Using a sample consisting of 104 friendly and 104 hostile M&As in 1998 Weir and Laing (2003) concluded that companies acquired in friendly acquisitions were more efficient, used their assets more effectively, and had a lower market-to-book ratio, compared with target companies in hostile bids. This is in line with Sun et al. (2012), who suggested that friendly negotiations with target firms are more likely to lead to a smooth transition of management teams and thus, add value in an M&A transaction.

2.2.3. Domestic vs. Cross-Border Acquisitions

Acquisitions can also be classified as *domestic* vs. *cross-border*. There are arguments for and against the reasoning behind the two classifications. For instance, Berger *et*

al. (2001) suggested that geographical distance, language barriers and cultural differences lead to inefficiencies that not only impede cross-border activity, but also offset some of the gains in cross-border deals. Danbolt (2004) contended that economies of scale may be easier to achieve in domestic, rather than cross-border deals. Further, he suggested that the target firm's shareholders may gain more in domestic acquisitions, if acquiring companies share cost savings with target shareholders. In addition, according to Fang et al. (2007), marketing knowledge resources can have a direct application in the same geographic setting, while technological knowledge resources might require more time to be adapted in the new business for any advantage to materialise. Nevertheless, the importance of crossborder acquisitions in industrialised countries has increased significantly over time, with the former accounting for more than 80% (in 2000) of all foreign direct investment (Conn et al., 2005). Finally, Danbolt and Maciver (2012), analysed the impact on targets and bidders from cross-border acquisitions into and out of the UK, in comparison to companies involved in similar domestic acquisitions. Their sample comprised 251 cross-border targets and 146 cross-border bidders. They found that both targets and bidders gained significantly higher abnormal returns in cross-border acquisitions

2.2.4. Classification Depending on the Relatedness of Business

In strategic management, the types of the relatedness of acquisitions can affect the relationship between the acquiring and acquired company (Calipha, *et al.*, 2010). Acquisitions may also fall into one of the following four categories:

- *Horizontal Acquisition:* A **horizontal acquisition** occurs if the two firms, which compete in the same industry, merge in order to reduce competition and to withstand a new demanding business environment. Typically horizontal acquisitions involve less risk contrasted to unrelated ones (Kitching, 1967).
- *Vertical Acquisition*: A **vertical acquisition** occurs between companies operating at different stages of the production process. This type of acquisition normally eliminates various coordination and bargaining problems between the supplier and the customer (Halpern, 1983).
- *Conglomerate*: A **conglomerate** (or **diversifying**) acquisition involves the combination of firms in unrelated lines of business; in such mergers it seems
that there is no scope for achieving *operating synergies*, as there is an lack of transactions among the subsidiaries (Mantell, 1998).

• *Concentric Merger*: A **concentric merger** involves the merging of two (or more) firms from the same sector, with the same production technology, and the same products.

Most of the mergers that occurred in the United States during the 1950s, 1960s, and 1970s were conglomerate mergers. A popular explanation for the predominance of conglomerate mergers during that time was that regulators would not approve most strategic combinations because of antitrust considerations (Gleason *et al.*, 2006). Then, they became much less common in the 1980s and 1990s, reflecting either the loosening of antitrust rules – that have allowed more strategic combinations – or an increase in the efficiency of financial markets, which could have the effect of reducing the financial synergies associated with a merger.

2.3. Merger Motives: Economic Theories (Neo-classical)

There are a number of different theoretical approaches dealing with the underlying motives of M&As. Although it is not the objective of this thesis to discuss in detail all of the underlying theoretical approaches of M&As, it is important to review the theoretical foundations this thesis was built upon. Therefore, this section discusses the neoclassical approach, or the *economic theories*, while the next section deals with the *managerial theories* and the *organizational theories* (Figure 2.2).

According to the **neoclassical approach**, in order for a company to survive in a competitive environment it should aim at **maximizing profits and shareholders' wealth** (Becker, 1962). According to Pazarskis (2008), the objective of shareholders' wealth maximization and profit maximization is threefold. Figure 2.2 shows that the former may be attained through (revenue-enhancement and cost-saving) synergies, or risk reduction (because the income streams of the merged firms, at least in related business lines, become more stable), or increased market power (as the number of potential rivals decreases after the merger).



Figure 2.2: Theoretical Approaches in Mergers and Acquisitions

2.3.1. Synergies

Synergies arise whenever the (present) value of the merged firm is higher than the sum of the value of each firm separately (Barney, 1988; Harrison et al 1991). For instance, the synergies arising from the acquisition of Firm B by Firm A have as follows

Synergies =
$$V_{AB} - (V_A + V_B)$$

where V_{AB} is the value of the firm after the acquisition, V_A is the value of Firm A, and V_B is the value of Firm B.

Synergies can further be classified into the following categories, depending on the corporate aspect they affect; *operating synergies*, *financial synergies*, and *managerial synergies* (Seth *et al.*, 2000) (Figure 2.3)

Operating synergies can be derived either from higher revenue, and/or reduced operating costs and, hence, they result in higher operating cash flow for the merged

firm. *Financial* synergies are achieved from the exploitation of tax shields and a reduction in the company's cost of capital in the wake of an acquisition; so they too could also lead to higher operating cash (because of the presence of tax shields). Operating and financial synergies create **efficiency gains** for the company, which, in turn, can increase its value.

According to the economic theories on merger motives, corporate value can also be increased through increasing **market power** (Figure 2.2). One has to carefully distinguish between efficiency gains, achieved through *operating* and *financial synergies*, and gains resulting simply because the merger increased the company's *market power*, thus improving its ability to extract consumer surplus (Chatterjee, 1986). In other words, it is desireable to have M&As taking place because of a possible exploitation of operating and financial synergies rather than because of an expected increase in market power and a reduction of competition.



Figure 2.3: Classification of Synergies

Recent contributions in the literature conclude that operating synergies are the most significant source of gains in a merger (Devos *et al.*, 2008). However, different categories of motives gave rise to the various M&A waves. Dedhia (2004), for

example, alludes to different underlying motives behind the various merger waves of the past:

- 1920: Mergers for oligopoly (i.e. aimed at increasing market power).
- 1960: Mergers in order to expand business activities and to reduce of risk (diversifying mergers). Many of those mergers however later proved to be unsuccessful (Andrade *et al.*, 2001)
- 1980: Mergers for market discipline (managerial efficiencies). Note, however, only 14% of deals in that decade involved hostile takeovers (Andrade *et al.*, 2001).
- 1990: Mergers due to the deregulation and liberalization of the markets.

Figure 2.4 presents the different types of operating synergies. Essentially, **operating synergies**, resulting from revenue enhancement and/or cost savings (Gaughan, 2007), affect the firm's operating cash flow. The next section (2.3.1.1) considers synergies arising from revenue enhancement and the subsequent one (section 2.3.1.2) synergies arising from cost savings.





2.3.1.1. Revenue Based Synergies

As it was mentioned there exist four types of revenue based synergies, namely those are: a) market coverage, b) innovation capabilities, c) marketing gains and d) market power.

a) Market Coverage

Horizontal acquisitions have the ability to enhance **market coverage** through the geographic extension of the market and through product line extension (Aaker, 1996; Srivastava *et al.*, 1998). Increased market coverage, through **geographical expansion**, permits the merged firm to sell existing products, once confined to particular markets, to a wider body of consumers, thereby enhancing the merged firm's revenues. At the same time the company, by increasing its geographical coverage, diversifies its sources of revenues, since different markets may be hit by different macroeconomic shocks, also in some cases that same macroeconomic shock can have different impact in two different markets.

b) Innovation Capabilities

In addition, sharing the product lines enables the acquirer and the target to enlarge the range of their products, and ultimately to cross-sell and deliver larger quantities of products to customers (Capron, 1999). The overall value of these products sold to the customer may be greater than the value of each product separately. Furthermore, this extension of the product line has the ability to increase revenues if the merged firm succeeds in taking advantage of the strong reputation of the acquired business brand, sales network or marketing activities (Capron and Hulland, 1999).

Innovation can be used strategically by firms to achieve competitive advantage (Hitt *et al.*, 1998 and Ireland and Hitt, 1999), and/or to revise their strategies in accordance with ever changing markets and customer needs, so that they can create value and growth (Amit and Zott, 2001). Acquisition and divestiture activities can be used to increase a firm's innovation performance (Van Beers and Sadowski, 2003). Thus, innovation may be used so as to achieve superior performance (Lee *et al.*, 2000 and Zahra *et al.*, 2000).

Recent research has highlighted the role of acquisitions as a mechanism for the redeployment of resources that are subject to market failure (Anand and Singh, 1997). Horizontal acquisitions may also enhance innovation capability by transferring any proprietary technology, patents, know-how across the merged entities; this may be done in order to enhance the product features (**product innovation capability**) or to improve organizational and marketing effectiveness (e.g., time to market, customer satisfaction) (Capron, *et al.*, 1998). Finally, innovation capability can be converted into a price premium and/or increased volume, leading to higher revenues.

c) Marketing Gains

A significant role that marketing plays lies in directing the market to recognise attributes and values that are unique to a product sought by customers (Lehman and Jocz, 1997). Also, marketing helps in revealing those values and attributes to product development teams through quality function deployment processes (Hauser and Clausing, 1988). Marketing gains are produced by more effective advertising, an improved distribution network, and a more balanced product mix. The redeployment of brands with great consumer base can help modify consumers' perceptions of existing products thus distinguishing them from products offered by competitors (Amit and Schoemaker, 1993). Overall, superior marketing capabilities can lead to enhanced customer value, which in turn can be translated into premium prices providing and/or increased volumes (Barney, 1991; Srivastava *et al*, 1998). Therefore, with marketing, resources can be identified that are marketing specific and possibly reveal some required attributes of the resource based view, such as being rare and difficult to imitate (Srivastava *et al*, 2001).

d) Market Power

A merger may reduce competition and thereby increase the **market power** of the merged firm, thus allowing it to increase prices and extract monopoly profits from consumers. Hence, there exists an expectation that firms acquire substantial market power as they grow in size, relative to their competitors (Chatterjee, 1986). The finance and economics literature has long recognized that firms could increase equity value by exercising market power (Devos *et al.*, 2008). For example, in a study

conducted by Kim and Singal (1993) reported that when airlines merged, that relative to other routes that were not affected by the merger, fares increased significantly. Thus if a merger results in increased market power there is an expectation of the combined firm to gain either from charging increased prices to the customers of by spending less to suppliers (Devos *et al.*, 2008).

The market power motive was a particularly important motive for many acquisitions prior to the passage and enforcement of antitrust legislation (Haleblian *et al.*, 2009). But ever since, any acquisition that is expected to reduce substantially competition in the market may be challenged by the country's regulators on antitrust grounds.

2.3.1.2. Cost-based Synergies

Figure 2.4 shows that **cost savings** is the second main source of operating synergies. Under certain circumstances, a larger firm may operate more efficiently than two smaller firms. **Efficiency gains** may come as the result of a number of factors which lead to lower costs. Three types of cost based synergies exist, a) economies of scale, b) economies of vertical integration and c) economies of scope.

a) Economies of Scale

Economies of scale arise when the average cost of production drops as the scale of production increases. There are various ways in which a company may experience a fall in the average cost of production as the scale of production expands. Companies might exhibit reduced costs as a result of **plant economies of scale**, i.e. the cost savings resulting from the fact that a factory, a workplace, or a machine is large (Sloman and Hinde, 2007: 187). In addition, economies of scale include the *spreading of fixed costs* over a larger production base (Shepherd, 1979).

Finally, a third source of economies of scale involves various *organizational efficiencies* arising in the process of company growth. Thus, economies of scale can arise in processes such as distribution, advertising, administrative activities, research and development and sales (Porter, 1980; Scherer, 1980).

Economies of scale are more likely to be achieved in horizontal acquisitions, where firms have overlapping businesses, rather than in unrelated acquisitions.

Furthermore, since economies of scale are achieved by spreading the amount of fixed costs over more activities, they are more likely to arise in related acquisitions than in unrelated ones (Seth, 1990a).

Nevertheless, the sheer size and the respective bureaucracy in businesses may sometimes lead to a number of problems such as a) immobility, making the institution unable to respond to changing customer needs, b) profit attribution contradictions and, finally, c) the merging of different company cultures and management styles can have a negative impact on the performance of staff and consequently the delivery of services (Walter 1997).

b) Economies of Vertical Integration

Vertical integration facilitates the coordination and administration when two (or more) firms operating at different stages of production merge (Gilsdorf, 1995).

Nowadays, however, there is a reversal of the trend for vertical integration, as companies are finding it more efficient to *outsource* the provision of many services and various types of production. This is mainly because of two reasons. First, an outside supplier could, for various reasons, have lower production costs. Second, a company may have more bargaining power when it transacts with independent suppliers than when it produces the inputs in-house (Mason and Phillips, 2000).

c) Economies of Scope

Cost efficiencies may also be due to *economies of scope*. **Economies of scope** arise when the merged firm achieves cost savings because it has increased the range of goods and services produced. Once an imperfectly divisible asset that was underutilized can be exploited to produce several outputs, economies of scope can arise (D' Aveni *et al.*, 2004). At the same time, however, the production of these added goods and services must be based, solely or in part, on shared factors of production. In other words, *economies of scope* are present whenever it is less expensive to combine two or more product lines than to use them separately (Panzar and Willig, 1981).

Cost reduction because of economies of scope can arise from a number of sources. In particular, they may be the result of a) spreading the fixed expenses of managing

client relationships, such as human resources, information technology and sustaining good reputation, over a broader output mix, b) the efficient use of established distribution channels for delivering additional products at lower marginal costs and c) synergies in the use of knowledge related to the production of services (Herring and Santomero, 1990).

One way of increasing the scope of the firm is with horizontal acquisitions commonly increase the scope of the firm and allow spreading the firm's resources over a broader range of products (Lubatkin *et al.*, 1998).

2.3.1.3. Operating Synergies: Managerial Efficiency

An acquisition may also facilitate the elimination of management inefficiencies at the target firm. In theory, there is always another management team that is willing to acquire an underperforming firm, in order to remove those managers who have failed to capitalise on the opportunities to create value (Weston *et al.*, 2004). Managers who offer the highest value to the owners of the target firm will take over the right to manage the firm. As such, a company may choose to acquire a target company in order to improve the latter's managerial efficiency, by restructuring its operations (Copeland et al., 2001). Of course the bidder sees value in the target company and this is the reason that drives the acquisition. At the same time, senior top executives and managers in the target firm will attempt to improve their managerial efficiency just to avoid of dismissal after acquisition.

2.3.1.4. Lower Weighted Average Cost of Capital and Diversification

Another source of synergy depicted in Figure 2.3, is financial synergy. **Financial synergies** may arise if a merged company can achieve a lower cost of (weighted average) cost of capital by improving its bargaining power over its suppliers of capital. Furthermore, financial synergies can also arise because of tax savings. In addition, a common motivation for a financial acquisition is that the acquirer believes that the target firm is undervalued relative to its assets due to bad management.

Indeed, larger companies normally face more favourable financing opportunities (Brealey and Myers, 2000:949), and this results in a fall in the cost of debt and equity capital, and, consequently, in the reduction of the combined firm's weighted average

cost of capital. The firm's cost of equity can simply be reduced due to the cost savings resulting from larger equity issues, which the merged firm is expected to make.

Furthermore, a *lower cost of debt* for a merged firm is exactly what is expected in a well-functioning bond market. While two firms are separate, they do not guarantee each other's debt, and if one fails its bondholder cannot ask for their money from the shareholders of the other firm. But after the merger the shareholders of each company effectively guarantee the debt of the other company; if one part of the business fails, the bondholders can still take their money out of the other part. Because of these mutual guarantees, the debt of a merged firm should be less risky, hence lenders will demand a lower interest rate.

2.3.1.5. Financial Synergies: Tax Savings

Tax gains can be a powerful incentive for some acquisitions. The possible tax gains from an acquisition include the following: (a) The use of tax losses; (b) the use of unused debt capacity (Ross *et al*, 1999: 768-769).

a) The Use of Tax Losses

Normally, a company that makes losses on a pretax basis does not have any tax liability. Such firm may be an attractive target for a profitable (on a pre-tax basis) company with significant tax liabilities, since, other things being equal, the combined firm will have a lower taxable income. Indeed, studies by Auerbauch and Reishus (1987) and Hayn (1989) have confirmed the importance of taking advantage of tax losses in a potential target.

b) Unused Debt Capacity

Some firms do not employ debt in full capacity. This makes them potential targets in acquisitions. Adding debt can provide important tax savings, and many acquisitions are financed with debt. The acquiring company can deduct interest payments on the newly created debt and reduce taxes.

2.3.1.6. Managerial Synergies

Finally, the third source of synergies involves *managerial synergies*. In general, a acquisition can be used as a tool to improve the managerial efficiency of a target firm (Gorton *et. al* 2009). Indeed, since inefficient managers are unlikely to fire or demote themselves, the shareholders in the firm can "elicit" a merger proposition in order to discipline the incompetent managers. So **managerial synergy** involves the emergence of a more effective management in the wake of an M&A; the precondition for this efficiency to be dubbed a managerial synergy is that this increased effectiveness in management (of the target firm) could not have occurred without the merger of the two firms. As such, the new management imposed in the target firm by the acquirer will increase the former's efficiency if the latter better exploits the target's resources.

If there is an underlying managerial motive behind a merger in terms of aiding attrition of underperforming members of management, then it is expected that this will result in managerial turnover in the target firm post acquisition. Indeed, this is what Martin and McConnell (1991) showed in their study; it was demonstrated that in the year following the acquisition, the chief executive of target firms (which had poor performance for a four-year period before the acquisition) was four times more likely to be replaced than during earlier years.

Furthermore, Parrino and Harris (1999) found that replacing the management of the target firm results in superior post-merger performance. The authors argued this is because the existing management may not act in the interest of shareholders, or because their incentives are not strong enough.

2.3.2. Reduction of Risk and Diversification

As depicted in Figure 2.2, risk reduction (through diversification) constitutes another cited economic motive for a merger (You and Daigler, 2010). A common argument in support of diversification is that lowering the risk of a firm's stock increases its attractiveness to investors and thereby reduces the firm's (equity) cost of capital. This is due to in theory, the more diversified a business is, the lower the variability of its EBIT (earnings before interest and tax), and the lower its level of business risk, its beta, and, ultimately, its cost of equity.

A common argument against the risk reduction opportunities offered by diversification is that investors are not interested in the reduced (unsystematic) risk of a diversified firm, since they can easily achieve this at a lower cost by holding a well-diversified portfolio. Hence, for a diversification strategy to increase the value of a firm's shares, it must do more than simply reduce risk. Diversification must thus create either operating synergies or financial synergies. Further, diversification can do little to eliminate *systematic risk*, i.e. risk which all businesses face.

The degree of diversification depends on how related the lines of business or two (or more) merging firms are. Different degrees of business relatedness, between the acquiring firm and the target firm, can have different effects on value creation and, ultimately, on acquisition performance (Lee and Liebermand, 2010). As such, opportunities for cost savings, achieved through divestiture of redundant assets, can be significantly enhanced as the degree of relatedness increases and as the redeployment of resources into new areas takes place (Capron *et al.*, 1998; Penrose, 1959; Teece, 1980, 1982)

The underlying motives prompting a company to acquire related or unrelated businesses have received great attention in strategy research, yet little agreement on the relationship between diversification and post-acquisition performance exists (Palich et al., 2000; Teece, 1982). In theory, diversification must contribute to superior performance to the point where resources become too complex to manage or business units become unrelated (Wan et al., 2011). According to Ng (2007) the reasons behind the diversification of an organisation into unrelated businesses are not well understood in strategy research.

2.3.3. Increase in Market Power

Finally, in Figure 2.2, it is seen that increasing market power is another area of emphasis for the neoclassical approach to the underlying motives of a merger. The profit maximization goal, which the neoclassical theories see the overriding objective for each firm, can also be attained through increased **market power**, which usually results in the firm charging a *higher price* in order to earn a greater profit margin; in this way it appropriates part of the consumer surplus. The higher price can be effected since the number of competitors in the market after the acquisition falls; this

can be due to either the direct effect of the acquisition or because of the barriers to entry the merged firm may impose to any incumbent firms.

Further, an acquisition can give the acquiring firm the direct control over the new market and provide it with the opportunity to take advantage of the existing distribution networks or different brands in the domestic or international market.

2.4. Merger Motives: Non-Economic Motives

2.4.1. Managerial Theories

According to **managerial theories**, the underlying motives of an acquisition may not be related to operating or financial synergies but, instead, may be associated with *managerial considerations* (Jensen and Meckling, 1976; Gorton *et. al* 2009).

This theory came into prominence when Mueller (1969) argued that the salaries and the extra benefits (in the form of bonuses and stock options) managers receive tend to be associated with the size of firms, rather than with the company's profitability. As such, managers may resort in an acquisition so that they increase their pay and prestige. Also, Mueller (1969) pointed out that smaller firms usually return a higher portion of their profits to shareholders, compared with more mature and larger companies. This is due to that large companies while trying to increase in size, they become less interested in enhancing the welfare of their shareholders.

Proponents of the *managerial theory* point to the conflict between the interests of the management team and those of the owners of the firm. Specifically, in companies with a high diffusion of shares and non-dynamic systems of internal control, opportunistic managers may pursue their own objectives, without taking into consideration the interests of the shareholders (Jensen, 1986; Gorton *et. al* 2009). This type of behaviour on the part of the management can, inter alia, lead to excessive expansion of the company's lines of business (Dickerson *et al.*, 2002) and short-term investments (Markidis and Singh, 1997). At the same time, acquisitions and firm expansion might reduce the risk of unemployment for top managers (Martin and McConnell, 1991).

According to the managerial theories, managers do not pursue the traditional goal of shareholders' wealth maximization. These non-value-maximizing actions may ultimately cause a fall in the company's share price.

Indeed, if markets are not perfectly competitive the management of companies must pursue the goal of size maximization (instead of profit maximization) (Gorton *et al.*, 2009; Jensen and Meckling, 1976; Winter, 1964) this goal can easily be achieved though an M&A. Managers may be also motivated to increase the size of the firm, if their compensation rises with it and entrenches them to their current positition (Shleifer and Vishny, 1989). To this end, one should expect managers to pursue diversifying mergers in order to decrease earnings volatility, which, in turn, enhances corporate survival and protects their positions.

The reaction to these theories is that managers do try to maximize value but, in their effort to increase the size of the firm, they may commit a lot of mistakes when it comes to correctly assessing the true value of the target firm. More particularly, according to the theory of **managerial hubris** (Roll, 1986; Goergen and Renneboog, 2004) managers may have good intentions in increasing their firm's value but, being over-confident, they over-estimate their abilities to create synergies. This over-confidence, in turn, increases the probability of overpaying (Malmendier and Tate, 2008).

Jensen's (1986) theory of managerial discretion asserts that it is not over-confidence that leads to unproductive acquisitions, but instead the presence of surplus liquidity, or free cash flow (FCF). Firms whose internal funds are in excess of the investments required to fund positive net present value projects, he suggests, are more likely to make quick strategic decisions, and are more likely to engage in large-scale strategic actions with less analysis than their cash-strapped peers. High levels of liquidity increase managerial discretion, thus causing managers to choose probable "bad" acquisitions when there exist no "good" ones to utilise (Martynova and Renneboog, 2008).

2.5. The Resource-Based View of the Firm

One of the central aims of this thesis is the examination of the effect of *resource redeployment* on the post-acquisition performance of the merged firms. The analysis of the literature has so far focused on the fundamental economic theories relevant to acquisition motives, both economic and non-economic, and cost- and revenue-based synergies. According to Barney (1991), firms, since the 1960's, use a single organising framework to explain that in order to sustain competitive advantages they can do so by implementing strategies that exploit their internal strengths. This can happen with taking advantage of environmental opportunities, while trying to avoid internal weaknesses.

Barney (1991) formulated the resource-based view of competitive advantage that relied on two assumptions: a) the resource based view assumes that firms within an industry can be heterogeneous by using the strategic resources they control and b) these resources may not be perfectly mobile across firms, and therefore heterogeneity can be long lasting. Neo-classical economics according to Barney (2001) concentrate on how market forces determine the quantity, quality and price of goods and services sold in the market.

In general, resource redeployment concentrates on shifting resources from one firm to another, so that the latter can be used more efficiently. This section presents the *resource-based view* (RBV) or *resource-based theory* (RBT), which emphasizes the role of appropriate resource utilization in boosting corporate profitability.

2.5.1. The Basic Assumptions of the Resource-Based View Theory

Penrose (1959) recognized the fundamental roles that resources play in a firm's competitive position. Then, Wernerfelt (1984) introduced the idea that firms should not only be examined from the product side, i.e. at the industry level, but they must also be looked at from the resource side, i.e. at the firm level. Specifically, Wernerfelt (1984) argued that "for the firm, resources and products are two sides of the same coin" (1984: 171).

The **resource-based view** (**RBV**) of the firm advocates that a company's competitive advantage originates at the firm, and not at the industry level, and specifically in the

unique bundle of *resources* and *capabilities* the firm commands (Barney 1991; Conner 1991; Peteraf 1993; Teece, Pisano, and Shuen, 1997).

Resources in the accounting context "resources" are identified with the firm's "assets" are "stocks of available factors that are owned or controlled by the firm (Amit and Schoemaker, 1993:35). The resources can be (a) **physical resources**, such as plant equipment, location, access to raw materials; (b) **human resources**, such as experience, judgment, decision-making skills, intelligence, relationships, knowledge; and (c) **organizational resources**, such as culture, formal reporting structures, control systems, coordinating systems, informal relationships. Physical resources are mainly *tangible resources*, while human and organizational resources are *intangible resources*.

A firm's resources may be valuable to it if they:

- Can add value to the firm either by influencing the firm's demand curve or the firm's supply (cost) curves.
- Are rare, as few competitors may have them.
- Are difficult to imitate because competitors can't copy them.
- Are difficult to substitute

It is not however that resources *per se* are important, rather it is their functionality and how productively they are employed that makes the difference (Peteraf and Bergen, 2003; Lockett et al, 2009). This brings up the issue of **capabilities**, which refer to "*a firm's capacity to deploy resources, usually in combination, using organizational processes, to effect a desired end*" (Amit and Schoemaker, 1993: 35). In other words, a firm will combine its resources with its capabilities in order to perform a business process in line with its strategy. For instance, a firm pursuing a differentiation strategy would focus on new product development, whereas a firm following a low cost strategy, would focus on improving manufacturing process efficiency.

Capabilities "are information-based, tangible or intangible processes that are firmspecific and are developed over time through complex interactions among the firm's Resources. They can abstractly be thought of as 'intermediate goods' generated by the firm to provide enhanced productivity of its Resources, as well as strategic *flexibility and protection for its final product or service.*" (Amit and Schoemaker, 1993: 35).

Resources that have a positive effect on competitive advantage are usually accumulated over time, and they can be multifaceted (Dierickx and Cool, 1989; Reed and DeFillipi, 1990; Zander and Kogut, 1995). However, there is a possibility that some resources can have negative effects on organizational competitiveness and performance (Newbert, 2007; Armstrong and Shimizu, 2007). As such, according to the RBV, managers must also be able to recognize these "harmful" resources, but they are daunted by the task of removing them.

Furthermore, successful firms possess distinctive resources and this attracts other firms that may not have the ability to develop resources quickly enough internally (Kiessling *et al.*, 2008). One of the critical elements of enhancing post-acquisition performance of the acquirer is the top management team (TMT) of the target. The reason that the TMT is important is because it possesses knowledge critical to the ongoing business operations, while at the same time its managers' removal can increase the level of disruption and ambiguity in the firm after the acquisition (Cannella and Hambrick, 1993; Krishnan *et al.*, 1997; Singh and Zollo, 1998). Organisational changes, such as in the composition of the acquired firm's TMT, can have a negative impact on post-acquisition performance of the firm (Kiessling *et al.*, 2008). Cannella and Hambrick (1993) argue that the loss of the target company's TMT will have a negative effect on the post-acquisition performance of the acquirer.

According to Conner (1991), another key postulation of the RBV is that differences in resources are affected with the differences in product or service attributes. Social complexity is a characteristic that can make firm resources less imitable (Kiessling *et al.*, 2008). Examples of socially complex firm resources that are difficult to replicate and imitate, include the interpersonal relation within a TMT and the reputation of the firm with its suppliers or customers (Kiessling *et al.*, 2008).

Walsh (1988) argues that the acquiring firm's management team often take control of the target, rather than use the target firm's capabilities. Managers from the acquirer will frequently force the target to make organisational changes such as compelling the acquired firm to enforce their managerial tools and then control the implementation of these tools (Capron *et al.*, 1998). Organisational changes, such as variations in organisational culture and structure that can have an effect on managers' attitudes, managerial styles, decision making, and organisational success, typically take place post-acquisition (Shrivastava, 1986; Krug & Hegarty, 1997). Because of these organisational changes, ambiguity is created in the upcoming part of the management in the organisation, which can result in managers having increased stress, lower job satisfaction and increased chances of leaving (Schweiger and DeNisi, 1991). Also, according to Finkelstein and Hambrick (1996), post-acquisition changes can affect the target firms' executives' dispositional characteristics that they use to solve problems and develop opinions.

2.5.2. Assumptions of the Resource-Based View Theory

One of the basic assumption of the RBV is that resources are both *heterogeneous* across firms and *imperfectly mobile* (Barney 1991; Hunt and Morgan, 1995). These two characteristics can lead to unique, firm-specific resource attributes, which can create a sustained competitive advantage for the firm in the marketplace. This can therefore result to superior performance (Capron and Hulland, 1999).

Resource immobility entails that firms' resources are not commonly, easily, or readily exchanged in the market (Mitchell, 1994). Moreover, firms regularly encounter difficulties in valuing discrete resources, something that makes resource redeployment more vulnerable to opportunistic behavior (Chi, 1994).

Consequently, if a firm's resources are not easily tradable in the market, they can become potentially "tradable" through a merger and acquisition; indeed this activity has become the primary mechanism for acquiring bundles of "non-tradeable" resources (Teece *et al.*, 1997; Wernerfelt, 1984). Further, in spite of managerial preferences for exchanging discrete resources on the market, resource immobility often drives acquiring firms to buy entire businesses.

2.5.3. Limitations of the Resource-Based View

Of course, every theory has its adversaries and, as such, the RBV is disputed in some instances. A very powerful criticism has been advanced by Hoopes *et al.*, (2003: 891), who argue that: "*the RBV seems to assume what it seeks to explain. This dilutes its explanatory power. For example, one might argue that the RBV defines, rather*

hypothesizes, that sustained performance differences are the result of variation in resources and capabilities across firms. The difference is subtle, but it frustrates understanding the RBV's possible contributions."

Another issue relating to the RBV and has been identified by several authors concerns the lack of commonality of terms (Priem and Butler, 2001; Foss and Knudsen, 2003; Hoopes *et al.*, 2003; Wade and Hulland, 2004). The terminology that is used to analyse and explain results of the RBV in different studies make it difficult to contrast and evaluate results. Some authors have even characterised the number of definitions as vast (Coates and McDermott, 2002; Ray *et al.*, 2004). In some cases consistency becomes an issue. For instance, there are studies that provide distinct meanings for the core terms of the RBV such as resources, competencies and capabilities (Helfat and Peteraf, 2003), whereas, in other studies the terms are used in interchangeably (Ray *et al.*, 2004). As a result, this luck of commonality of terms has an effect on the value of the results of RBV research (Nanda, 1996). This vagueness of the RBV with respect of the terminologies used is considered as a limitation of the RBV research (Hax and Wilde, 2001).

An additional limitation of the RBV is that studies of firm performance and their resources can vary substantially in terms of methodology utilized. Rouse and Daellenbach (2002) doubt the bias that exists towards quantitative research methods suggesting that such a methodology is not deemed appropriate for RBV research. According to Chan (2000) RBV may not be fully understood or comprehended until more qualitative research is utilised.

2.6. Dynamic Capabilities Perspective

Following the analysis in the previous section, the underpinnings on which the RBV is based, is that resources are valuable, rare, imperfectly imitable and imperfectly substitutable. In addition, those resources are heterogeneous across organizations and this heterogeneity can sustain over time (Abrosini and Bowman, 2009). RBV theory is concerned with how some firms can achieve super-profits in equilibrium and, because of that, is considered as a static view (Priem and Butler, 2001; Lockett et al, 2009).

As mentioned before, one of the limitations of the RBV is that the creation of future valuable resources is elicit, and how those valuable, rare and unique resources can be revitalised in changing environments; this is where the capability perspective comes into effect (Amrosini and Bowman, 2009). The dynamic capability perspective is an extension of the RBV as their assumptions are similar (Barney 2001b). The RBV, according to Teece and Pisano (1994) was not capable of offering explanations in how some firms that were successful showed "*timely responsiveness and rapid and flexible product innovation, along with the management capability to effectively coordinate and redeploy internal and external competences*" (Teece and Pisano, 1994, p.537). Also, Eisenhardt and Martin (2000) argue that the RBV has not explained sufficiently how and why some firms possess competitive advantage in conditions of rapid and unpredictable change. It was through the realisation that some successful firms in changing environments were not able to adapt successfully (Harreld et al 2007) when Teece et al (1997) argued how the dynamic capability perspective was able to overcome the limitations of the RBV.

According to Ambrosini and Bowman, (2009) the dynamic capability perspective is based on the recognition of a firm's survival and growth, thus it draws arguments from a series of theoretical perspectives not just evolutionary economics. Furthermore, they argue, that the dynamic capability view can be considered as an extension of the RBV thinking and the same holds for related theories such as the core competence perspective (Prahalad and Hamel 1990) and the knowledge-based view (Grant 1996). What they share in common is that they all view the firm as a bundle of heterogeneous and path-dependent resources, and they seek to explain how sustainable competitive advantage is generated (Lockett and Thompson, 2001).

2.6.1. Definitions, Assumptions and Typologies

According to Leonard-Barton (1992) dynamic capabilities help firms to sustain a competitive advantage and can help them avoid developing **core rigidities** that deter development and suppress innovation. Core rigidities are the opposite of the valuable, rare non-imitable resources; they therefore represent past valuable resources that become obsolete and deter development (Ambrosini and Bowman, 2009). There are several authors that have provided a definition of dynamic capabilities. The adopted definition in this thesis is that dynamic capabilities

represent "the abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its principal decision-maker" (Zahra et al., 2006, pp.918). This definition was adopted because it encompasses the concept of resource reconfiguration as an integral aspect of dynamic capabilities. Therefore, dynamic capabilities can be viewed as the ability of the management team to realise opportunities and, subsequently, use these to reconfigure and redeploy existing routines or resource configurations.

To better comprehend the expression dynamic capabilities, according to Ambrosini and Bowman, (2009), one has to forget the definition of capability according to the RBV, and avoid decomposing the term into two separate words. Therefore a *"dynamic capability is not a capability in the RBV sense, as it is not a resource. A dynamic capability is a process that impacts upon resources*" (Abrosini and Bowman, 2009, p34).

Moreover, dynamic capabilities can be viewed as the ability of a firm to generate, transform or even broaden its resource base (Helfat, 2007). Therefore the use of dynamic capabilities has to be viewed as a deliberate effort to change the firm's resource base. Additionally, their role is to have an impact on the firm's existing resource base and transform it in a way that a new bundle of configuration of resources is formed for the firm to sustain or even enhance its competitive advantage (Ambrosini and Bowman, 2009).

According to Bowman and Ambrosini (2003) there exist four main processes of dynamic capabilities. a) **reconfiguration**, which refers to the recombination of assets and resources (as in the case of an acquisition) b) **leveraging**, which refers to the replication of a process or a system, or deploying a resource into a new field (an existing brand to a new product) c) **learning**, which involves tasks to be executed more effectively and resourcefully after they have been implemented successfully or not, and d) **creative integration**, which represents firm's ability to incorporate its assets and resources after a new resource configuration.

Finally, Eisenhardt and Martin (2000) argue that acquisitions, alliances and product innovation can be characterized as 'real' dynamic capabilities as they allow for the renewal and reconfiguration of a firm's resources. They also suggested that often in

dynamic markets it is reasonable to use dynamic capabilities to build new resource configurations and move into new competitive positions using a "path-breaking strategic logic of change" (Eisenhardt and Martin, 2000, pp.1118).

Thus using arguments inherent in the dynamic capabilities sustaining long-term competitive advantage lies in the recombination of assets and resources, that is resource reconfiguration (Eisenhardt and Martin, 2000; Bowman and Ambrosini, 2003; Abrosini and Bowman, 2009).

2.7. The Merger's Cost and Premium, and the Method of Payment

Before reviewing the literature on the measurements of post-acquisition performance, other important issues of interest in the literature on M&As have to be presented. Those issues relate to how much bidding firms pay for their targets and what method of payment they use to complete the deal. In the following section, these issues are discussed and analysed.

2.7.1. Merger's Cost and Premium

The **merger's premium** is the difference between the **cost** of acquiring the target and the target's market value.

$$Premium = Cost - V_{T}$$
 5.1

where, V_T is the market value of the target company. Of course, the cost of the acquisition could be expressed either in terms of cash or in terms of stock. Essentially, the method of payment in an acquisition (with cash or with stock) conveys information about the bidder's assessment of either its own value or the value of the target (Loughran and Vijh, 1997; Rau and Vermaelen, 1998); managers who believe their stock is overvalued (undervalued) pay with stock (cash).

Most of the times managers overpay in a takeover deal, justifying the high cash price (and premiums) paid on grounds of potential synergies that might arise from the merger (Damodaran, 2010: 17).

There are several suggestions as to what triggers this overpayment phenomenon. Roll (1986) suggested that the managers of acquiring firms simply make erroneous

valuation of the target companies, ending up paying high premia. Then, Graham *et al.*, (2008) argued that managers are led to an overvaluation of the target companies simply out of overconfidence in their valuation skills.

In some cases however the merger premium paid is relatively small. For instance, when the target firms are large companies, and the competition for their takeover is small, the merger premium involved will be rather low (Gorton *et al.*, 2009). This result was also corroborated by the study of Alexandridis *et al.* (2011).

2.7.2. The Method of Payment

The method of payment for the acquisition has been found in some studies to impact on the wealth of the shareholders. For example, Goergen and Renneboog (2004) found that cash offers yielded *abnormal returns* close to 10 percent upon the announcement of the merger, while stock offers (or equity offers in comination with cash or loans) earned investors only 6 percent.

Some early studies on the issues have presented evidence that cash payments are constistenly higher than stock-financed deals (Loughran and Vijh, 1997). However, for the US market, the issuance of stock has become the predominant method financing an acquisition. For example, in a study conducted by Andrade *et al.*, (2001) on a total of 4,300 U.S. deals, it was found that during the 1990-1998 period stock financed deals accounted for 57.8% of all sampled acquisition cases, compared with 27% for cash-financed deals (see Table 2.1, section 2.9.1).

When it comes to the effect of the means of payment in a M&A deal on postacquisition performance, the empirical evidence is mixed. On the one hand, a number of studies (Gregory, 1997; Rau and Vermaelen, 1998) pointed to lower or negative abnormal returns for the bidder in case of a stock-financed deal, and higher or positive returns for cash-financed deals. Consistent with this evidence, another strand of research (Cosh and Guest, 2001; Linn and Switzer, 2001) showed that cash bids are associated with better performance in both the short run and the long run. Finally, Conn *et al.* (2005) found that bids funded with any method of payment except cash lose -0.47% over a period of 36 months after the announcement. On the other hand, Gregory (1997) found negative and significant abnormal returns related with cash offers. Complementing the above study, Chang (1998) found insignificant excess return for the bidder in cash offers and positive and significant excess return in stock offers, while Fields *et al.* (2007) documented insignificant results.

Various studies state that hostile takeovers and tender offers are more likely to be financed with cash, whereas friendly takeovers are more likely to be funded with equities (Agrawal *et al.*, 1992; Rau and Vermaelen, 1998; Travlos, 1987). Various studies that focused their research on whether cash offers or equity offers maximize value provide evidence that cash bids in the short run (Dong *et al.*, 2005; Draper and Paudyal, 1999; Travlos, 1987; and Walker, 2000) and in the long run (Cosh and Guest, 2001; Linn and Switzer, 2001) enhance performance.

Finally, Faccio and Masulis (2005) studied the choice of the payment method in M&A deals that took place in 13 European countries, between 1997 and 2000. The payment method was classified by the authors in one of the following three categories: *cash only, stock only* (it included stock with full voting rights or inferior voting rights), and *mixed payment*. In the majority of cases studied by the authors, the method of payment used involved cash.

2.8. Measuring the Post-Acquisition Performance

There are several approaches in measuring the performance of companies in general or its performance after the conclusion of an acquisition deal. In order to measure the performance of M&As both academics and practitioners have relied on accounting figures and/or market data. Nonetheless, strategic management and organizational behaviour researchers usually employed manager's personal valuations (Papadakis and Thanos, 2010).

Zollo and Meier (2008) suggested the use of the following approaches in measuring post-acquisition performance: (1) market measures of performance, i.e. the share price returns to acquiring and target firm separately and the corresponding returns for the combined firm; (2) objective measures of performance, such as accounting ratios; (3) subjective measures of performance. Cording *et al.*, (2010), found that the

majority of studies on M&A employed market measures and accounting measures in order to examine post-acquisition performance.

This thesis uses the third type of measures to assess company post-acquisition performance, since neither accounting nor market measures can be used as valid measures of post-acquisition performance. This can be mainly attributed to that it is quite difficult for market measures and accounting measures to capture the efficiency gains resulting from the operating and financial synergies of an acquisition.

2.8.1. Market-Based Measures of Corporate Performance

The most widely cited measure of post-acquisition performance has been the stock market reaction to the announcement of the merger (Dodd, 1980; Jensen and Ruback, 1983; Franks and Harris, 1989). These measures are predominantly used in event studies for examining both the short-run and the long-run reaction of the share price (of either the target or acquiring firm) to the announcement of a merger. The *abnormal return* of a company's share is studied, in the framework of an event study, in order to derive conclusions about the post-acquisition performance of either the target or the bidder.

In the typical **event-study** methodology the date of the merger announcement is the relevant event (Mueller and Yurtoglu, 2007). The **abnormal return** of a share is simply the difference between its actual return and the *expected return* over the **event window**, which includes a total of *M* days distributed prior and after the time the event (that is, the announcement of a merger) takes place (Duso *et al.*, 2010) (Figure 2.5). The **expected return** is usually estimated according to an asset pricing model, such as the *Capital Asset Pricing Model* (CAPM) or the *Three-Factor Model*, associated with the work Fama and French (1993), and using observations (i.e. share price returns and the returns of a relevant stock-market index) up and including time (see Fig. 2.7). Once these returns have been estimated, they are then compared to the stock's actual return over the time interval for the period. In this way, the *abnormal returns*, and the **cumulative abnormal returns** (*CAR*) are estimated over the event window (Duso *et al.*, 2010).



Figure 2.5: The Time Line in Event Studies

In an efficient capital market, the change in the share price of the target and the acquirer should reflect investors' expectations (beliefs) concerning the value to be created by the merger, and how this added value will be divided between the parties of the deal. However, it does not suffice to look at share price returns around the merger announcement date.

More specifically, any *market measures*, such as the *abnormal gains (losses)* the shareholder may earn (suffer) as a result of an announcement of a merger, cannot measure acquisition performance (Montgomery and Wilson, 1986), since these changes reflect the capital markets' "*a priory*" expectations concerning the merger and not the actual value creation (if any) associated with the particular acquisition case (Lepetit *et al*, 2004).

Further, when using market measures to assess the post-acquisition performance the assumption that the market is efficient must hold, so that the share price incorporates all relevant information available to investors. Normally, however, investors do not have all the necessary information in order to properly assess the effectiveness of an announced M&A deal (Oler *et al.*, 2008). Rather, the relevant information is revealed to the wider investment public gradually and over time; hence it should be expected for the share price to adjust accordingly to the revelation of new information. Another problem with the use of market measures in assessing post acquisition

performance has to do with the fact that the event under study must be fully unanticipated. However this is not always true, since most investors and market participants are well aware of the business strategy of the firms they follow, and hence they know well in advance the company's future plans.

2.8.2. Accounting-Based Measures of Corporate Performance

Accounting measures are related to ratio analysis and the company's performance review process. **Ratio analysis**, gives an objective financial account into the current state of the company, regarding many aspects of business performance in the past. This information is valuable to all stakeholders in the firm (Davies and Pain, 2002).

The standard procedure with accounting measures and ratio analysis is to compute some financial ratios prior and subsequent to the merger and look at changes in these, before and after the deal. The underlying rationale of this approach is that any efficiency gains arising from an acquisition will have to be reflected in the company's financial statements (Tuch and O'Sullivan, 2007).

One of the most widely used ratios in the M&A literature is the return on assets (ROA) (Bertrand and Betschinger, 2011), which is defined as earning before interest and tax (i.e. operating income) over total assets (in some cases cash is exluded from the denominator of this ratio). There are several problems associated with accounting measures of post-acquisition corporate performance (Hult *et al.*, 2008). First, these measures include the impact of several other factors on corporate performance and, hence, it may be difficult to draw conclusions concerning the significance of the merger "effect" when using these. Second, accounting measures reflect information concerning the past rather the present performance or the expected corporate performance in the future. Finally, accounting data could be distorted by manipulation.

2.8.3. Subjective Measures of Corporate Performance

Subjective measures of performance involve the management's *self-reported opinions* on the performance of their company. Specifically, managers are asked to express their opinion whether the acquisition has achieved its objective or not. Normally, the respondents are the executives of the acquiring firm and the target

firm. At any rate such measures cannot be used in order to anticipate *ex ante* the possible outcome of an acquisition.

Dess and Robinson (1984) advocated the use of *subjective measures* in assessing the corporate performance following an M&A activity. Brouthers *et al.* (1998:349) argued "*that a better performance measure of acquisition is not an arbitrary economic measure of profitability or shareholder value, but is the achievement or non-achievement of the original objectives of the merger.*" Such measures have been used in studies by Brock (2005) and Hayward (2002), although the latter has used subjective opinions from external informants on the M&A deal.

Two main benefits associated with the use of subjective measures in assessing postacquisition performance. First, since these measures reflect private information, they eliminate the effect of other variables (except from the effect of the merger) on corporate, post-acquisition, performance. Second, with subjective measures, the researcher can test for the impact of several motives for the M&A. When it comes to the disadvantages of subjective measures, the most important one is the possibility that the subjective assessment of merger's success may reflect some kind of bias on the part of the respondent- this is the so-called "managerial bias" (Schoenberg, 2006). Also in order to have an "objective" assessment, the respondents need to be quite familiar with the acquisition's objective (Datta, 1991).

By using market measures to measure the long-term performance of an acquisition, there is a possibility that the merger may be deemed unsuccessful using conventional accounting-based measures when actually the manager perceives it as successful. However, in most cases, objective and subjective measures of performance are likely to lead to similar conclusions (at least on the upside), since subjective measures may be influenced by objective performance ratings.

2.9. The Evidence on the Post-Acquisition Performance

This section presents the empirical evidence concerning the benefits (and costs) of a corporate takeover and their distribution between the parties involved. Specifically, sections 2.9.1 and 2.9.2 look at the evidence on the short- and long-term benefits of acquisitions from the perspective of bidder and target shareholders. Here, as a measurement of performance the effect of the acquisition (announcement) on share

price of the bidding and target firm is used; this is the typical event-study methodology discussed in the previous section. Section 2.9.3 looks at the evidence concerning the effect of the acquisition on corporate operating performance, where financial ratios are used as a measure of operating performance. Section 2.9.4 provides evidence of the subjective measures of performance and finally, Section 2.9.5 reviews evidence from Greek research studies.

2.9.1. The Short-Run Performance of Acquisitions

In an early survey of the literature, Jensen and Ruback (1983) looked at the share price gains and losses earned by companies involved in acquisitions. They found that target shareholders earned a 30% abnormal return in successful tender offers, while acquisitions were found to produce abnormal returns of 20%. Presumably, the high abnormal returns in tender offers reflect the high premium typically paid in such cases. In contrast to the shareholders of target firms, the shareholders of bidding firms did quite poor; they enjoyed abnormal returns of just 4% in tender offers, and 0% in acquisitions.

Andrade *et al.* (2001) studied US merger activity over the period 1973-1998; a total of 4,300 deals took place during this period. Some characteristics of these deals are shown in Table 2.1.

Their research, as depicted in Table 2.1, reports merger deals broken down by decade signifying that in those different time periods mergers deals were different in several ways. One major difference is the vast use of stock as a method of payment in the period 1990 - 1998 and also, that 70 percent of the deals that took place around that time involved stock compensations. Moreover, 58 percent of those deals were completely stock financed. That number constitutes a 50% increase than the deals that took place between 1980 and 1989. In addition, only 4 percent of the deals around the 1990s were hostile bids, whereas in the 1980s it was 14 percent. Andrade et al (2001) conclude that in the 1980s the volume of hostile takeover activity was exaggerated and one reason for that might be that their sample included all publicly traded firms and hostile activity was almost non-existent with smaller companies. Furthermore, they found that in the 1990s, merging companies were often in related industries taking part in a friendly stock swap.

	1973-1979	1980-1989	1990-1998	1973-1998
Number of Deals	789	1,427	2,004	4,256
Cash-Financed	38.3%	45.3%	27.4%	35.4%
Stock-Financed	37.0%	32.9%	57.8%	45.6%
Any-Stock	45.1%	45.6%	70.9%	57.6%
Hostile Bid at Any Time	8.4%	14.3%	4.0%	8.3%
Hostile Bid Successful	4.1%	7.1%	2.6%	4.4%
Own Industry	29.9%	40.1%	47.8%	42.1%
Abnormal Short-Term	24.8%	23.9%	23.3%	23.8%
Return for Target				
[-20,Close]				
Abnormal Short-Term	-4.5%	-3.1%	-3.9%	-3.8%
Return for Acquirer				
[-20,Close]				
Combined Short-Term	0.1%	3.2%	1.6%	1.9%
Return for Target				
[-20,Close]				

Table 2.1: Basic Statistics of the Deals Analysed in Andrade et al. (2001)

Table 2.1 shows that for an event window of 20 days prior to the merger announcement until the closing date of merger, the average abnormal return for the shareholders of target firms consistently (over the three periods under consideration) surpassed the corresponding return for the shareholders of acquiring firms, who actually suffered short-term losses. Clearly, the winners from the acquisitions, at least in the short run, were the shareholders of target firms. Furthermore, the combined short-run average abnormal return was very low for the periods considered.

In a study of 302 large acquisitions completed between 1995 and 2001 Henry, (2002) found that in 61 percent of the shareholders of the bidding firms suffered losses. Specifically, the shareholders of the bidding firms during the first post-merger year had average share price return 25 percentage points lower than the returns their peers earned from other companies in the same industry.

According to Henry's study (2002) the main reasons for this underperformance were the following. First, the acquiring firms often overpaid for their targets, and as a result the bulk of the acquisition's synergies went straight to the target's shareholders. Indeed, according to the study's results, the shareholders of the target companies earned, in two weeks surrounding the merger announcement, on average 19.3 percent more than their industry peers. Second, the management of the bidding firms often overestimated the expected synergies from the acquisition. Third, the time period for the integration of the operations between the bidding and the target firm was too long, thereby annoying customers and employees alike, and hence postponing any gains from the merger. Finally, the study revealed that bidders paying with stock had the worst performance.

Similar results were obtained in a fairly recent survey article by Tuch and O'Sullivan, (2007) who concluded that M&A lead to "at best an insignificant [short-run] impact on shareholders's wealth."

Homberg *et al* (2009) conducted a meta-analysis of 67 M&A studies. The authors considered studies on "related" mergers, where the "relatedness" was defined in terms of business, cultural, technological, and size aspects. The findings of this meta-analysis revealed that "positive effects can be expected under specific conditions only and have a limited overall impact on acquisition success". Put differently, *relatedness* in acquisition activity does not seem to be associated with increased shareholders' wealth.

2.9.2. The Long-Run Effects of an Acquisition

The general evidence from the long-run performance of an acquisition is that acquiring firms tend to under-perform over a long-time period following the acquisition.

Alexandridis *et al.*, (2011), using a sample of 3,691 U.S. public acquisitions announced between 1990 and 2007, showed that in the long-run bidding firms taking over large firms suffer losses (in terms of stock returns), while bidding firms engaged in small acquisitions earned positive abnormal returns for their shareholders. Specifically, on the one hand, it was found that acquirers which bought large targets experienced a (statistically significant) 12-month abnormal return of -3.40% and a

36-month abnormal return of -7.02%. On the other hand, bidding companies that bought smaller targets earned a (statistically insignificant) 12-month abnormal return of 2.64% and a (statistically significant, at the 10% confidence level) 36-month return of 8.64%. These abnormal returns were earned in the relevant time period following the month when the acquisition deal was agreed.

Also, the authors demonstrated that the post-acquisition operating performance of acquirers deteriorated only in large deals. Spefifically, they estimated the pre- and post-acquisition *return on assets* (i.e. the ratio of operating income to book value of total assets) and they found the following: while acquirers of large targets achieved a higher return on their assets (9-12%) compared to acquirers of small targets (3-5%), in the wake of the acquisition acquirers of large targets earned a median 9.45% over the three years following the large target acquisition compared with a corresponding figure of 11.86% for the acquirers of smaller targets.

2.9.3. Accounting-based Measures of Performance

This section looks at the evidence concerning the effect of the acquisition on the operating performance of the merged firms. The operating performance is usually assessed using a number of financial ratios, such as the *return on assets* or the *return on equity*. In general, studies examining the effects of M&A using accounting based measures, provide no clear evidence of post-acquisition performance (Tuch and O'Sullivan, 2007, pp.152)

In an early study, Chatterjee and Meeks (1996) studied 144 UK acquisitions that took place over ther period 1977-1990. From their empirical findings, the authors concluded that there was no change in corporate profitability of the merged firms for the period 1977-1985. For the subsequent period, i.e. for the period 1985-1990, the empirical findings of the research revealed a significant improvement in profitability to the tune of 13% to 22%, but this improvement was attributed by the authors to changes in UK's tax policy.

Andrade *et al.* (2001) studied 2000 US deals between 1973 and 1998. Using as a measure of performance the ratio of cash flow to sales, the authors found that merger transaction improved the company's performance relative to its peer companies.

However, the authors showed that the operating performance of the target and the acquirer was already strong even before the merger.

Ghosh (2001) examined 315 cases of the biggest US acquisitions that were effected during the period 1981-1995, by comparing companies who had at least made one acquisition over the aforementioned period with companies that made no acquisition during that period. The results of his research showed no difference in the ROA of the two groups of firms.

Martynova *et al.* (2006) examined the long-term profitability of 155 European cases of mergers and acquisitions, which took place over the period 1997-2001; both the bidding and target firms in the deals came from Europe or UK. The authors employed different measures of *operating performance*. Their results revealed that both acquirers and targets outperform the industry average before the takeover, however the "raw profitability" of the combined firms decreases significantly after the takeover.

In some studies the empirical evidence concerning the post-acquisition performance when the latter is measured by accounting measures are at best ambiguous. For instance, in one such study, Martynova and Renneboog (2008) found a positive effect on post-acquisition performance when cash-flow ratios were used in measuring such performance, and a negative effect when earnings-based ratios were used.

Alexandridis *et al.* (2011) calculated pre- and post-acquisition return on assets in order to assess the effect of the merger on operating performance. They found that large deals cost acquirers in terms of reduced operating performance.

2.9.4. Subjective Measures of Performance

Subjective measures of performance as it was mentioned earlier (Section 2.8.3.) comprise the management's *self-reported opinions* on the performance of their company. Benefits associated with the use of subjective measures in assessing post-acquisition performance include the elimination of the effect of other variables since these measures reflect private information. In addition, with subjective measures, the researcher can test for the impact of several motives for the acquisition.

Papadakis (1998), by using both objective and subjective measures found that longterm performance seems to be highly related to strategic investment decisions processes than short-term performance. The author argued that a major finding is that subjective performance measures appear to provide better results and that can be due to they are designed to capture the relative significance of each individual performance dimension to the specific company. Also, the subjective measures of the study converge with the objective measures signifying that the results are valid.

Capron (1999) examined the long term performance of horizontal acquisitions using a sample of 253 horizontal acquisitions in manufacturing in the US and Europe for the period of 1988-1992. Subjective measures of post-acquisition behaviour were used as readily available financial data were too unrefined to allow for differentiation of the different types of value-creating mechanisms. The results showed that both asset divestiture and resource redeployment enhance acquisition performance, nevertheless a major risk of hurting acquisition performance was found when target redeployed resources and divested its assets.

In a study by Ghobadian *et al.*, (2008) by using subjective measures to assess performance, the authors concluded that strategic planning increases a firm's survival chances. Three rationales were considered for using subjective measures. The first justification was due to the reluctance of SMEs to disclose financial information. The second was the strong correlation between objective and subjective measures of performance (Hart and Banbury, 1994). The third was based on the robust arguments offered by the literature in favour of using subjective measures when objective ones where not readily available or inappropriate (Garg *et al.*, 2003).

According to Lockett *et al.*, (2009), resources can have a number of different functions, which allow them to be employed through a number of different markets over time. Consequently it is important for managers to decide the most profitable management for the resources at their disposal. Therefore, resource usage is influenced by the subjective perceptions of managers. In addition, Homburg *et al.*, (2012), argue that subjective key informant responses on performance outcomes have a high probability of being accurate.

2.9.5. The Evidence from Greece

In Greece, due to the country's rigid structure (Pagoulatos and Triantopoulos, 2013) the emergence of M&A phenomenon considerably delayed compared with what was going on globally. Essentially M&As in Greece begun taking place from the mid 1980s. The Greek economy was populated by small companies, where ownership and the exercise of management were to be found in the same person. Also the country's banking system, being heavily controlled and regulated by the Bank of Greece until the mid-1980s (Rezitis, 2008), granted relatively easily credit to (some) enterprises, while at the same period the stock market being underdeveloped (Katsos and Lekkakis, 1991) could not be tapped by the businesses that could not secure bank lending.

In an early study of M&As in Greece, Katsos and Lekakis (1991) found that small to medium firms merge only with similar sized firms and that firms tried to combine capital assets and marketing networks. Mylonidis & Kelnikola (2005) in their study of post-merger performance looking into pre versus post-merger accounting ratio comparisons from five bank-deals in Greece found a positive impact on post-merger performance. Papasyriopoulos *et al.*, (2007), used an event study methodology to look into abnormal returns on stock prices on the day of acquisition announcements found that "good news" have a positive effect on abnormal returns and "bad news" a marginal negative one.

Furthermore, in a study looking into the operating performance of fifty Greek conglomerate and non-conglomerate mergers listed in the Athens Stock Exchange (ASE) for the period 1998-2002, Eleftheriades *et al.*, (2008) found that conglomerate mergers prevailed as more successful in liquidity and viability financial ratios.

Rezitis, (2008), examining the effect of acquisition activity on the efficiency and total factor productivity of ten Greek banks for the period 1993 to 2004 showed that the effects are negative.

Recent studies have shifted more focus on post- acquisition performance. Papadakis and Thanos, (2010), investigated corporate acquisition performance based on a sample of fifty domestic Greek acquisitions. Their results revealed failure rates of M&As that ranged from 50% to 60%.

Pazarkis *et al.*, (2011), investigated the post-merger operating performance of merger-involved firms in Greece at information technology industry, and at a knowledge-intensive industry. Their results showed a negative impact on post-merger performance regarding firms from a knowledge-intensive industry and no changes on any other examined ratios.

Agorastos *et al.*, (2011) examined the impact of the post-merger operating performance of thirty eight Greek firms at domestic and cross-border transactions using accounting data for the period 1998-2002. They found that cross-border M&As stipulate a better post-merger performance for the acquirer than the domestic ones.

Alexandrakis *et al.* (2012) studied the impact of mergers and acquisitions (M&As) on the post-merger operating performance of merger-involved firms at industrial goods and services sector of the ASE (Athens Stock Exchange) in Greece. The authors used accounting data (financial ratios) in order to measure the post-merger performance of a sample of Greek listed companies that undertook (at least) one acquisition in the four-year-period from 2004 to 2007. The results revealed that M&As had a negative impact on the post-merger performance of the merged firms.

Pazarkis *et al.*, (2013), examined the impact of M&As on the post-merger performance of Greek-merger involved firms by looking into the two profitability ratios (ROA and ROE). The sample consisted of seventy two acquirers listed in the Athens Stock Exchange for the period 1996-2007. Their results revealed that there is no significant change of any variable under investigation for the two profitability ratios and they concluded that M&As within the Greek sample do not lead to enhanced economic profitability. In addition, they argued that since there is no profitability enhancement the hypothesis for market power to increase profitability is not supported and the same holds for domestic versus international M&As

Finally, Halkos and Tzeremes (2013) applied a bootstrapped Data envelopment Analysis (DEA)-based procedure to investigate the degree of operating efficiency gains of 45 possible bank M&As in Greece for the period 2007-2011. Their results showed that a year before and after the Greek crisis, most of the potential bank M&As were unable to generate short-run efficiency gains.
2.10. Summary

In this chapter, the literature pertinent to M&As was presented, while theoretical propositions and empirical evidence were reviewed.

The thesis' approach to the underlying motives of the M&A is the *neoclassical approach*, which emphasizes the *economic motives* behind an acquisition. It discusses the various sources of synergies that can be derived when a company takes over another; these synergies contribute (or are supposed to) towards attaining the goal of *profit maximization* and *shareholders' wealth maximization*. Several sources of synergies were identified, such as revenue-based synergies, cost-based synergies, tax-based synergies, and cost-of-capital-based synergies. This thesis shall examine whether revenue-based synergies contribute to post-acquisition performance.

Also, this chapter discussed the *Resource Based View (RBV) Theory*, which stresses the importance of the quantity and quality of resources that a firm controls, in order to gain a competitive advantage over its competitors. A company has a **competitive advantage** over its competitors when its profitability (i.e. measured by the *return on invested capital*) is greater than the industry's profitability (Hill and Jones, 2004: 76). Once resources of a target firm have been acquired, they can then be either redeployed or divested. Thus, issues related to resource redeployment and revenue enhancement were discussed, along with the role of asset divestiture in cost savings. This is viewed in line with cost efficiency theories that emphasise the role of cost-based synergies. Since asset divestiture resource redeployment may not be solely related to cost savings and increased revenues, respectively, the cross effects of asset divestiture and resource redeployment were also considered. Also, the assumptions of the RBV along with its limitations as a theory were described.

So, according to the RBV, the thesis will examine whether acquiring another firm and making better use of the acquirer's or the target's resources contribute to positive post-acquisition performance.

Issues related to the evaluation and ways of measuring post-acquisition performance were put forward, which were broken down to three different kind of measures, namely: market-based measures, accounting-based measures and subjective measures. Based on market measures of assessing post-acquisition performance a large number of studies (in the recent past) have documented consistent gains for target firms and no-significant gains for the bidders (Hayward and Hambrick, 1997). This pattern was also confirmed in most recent studies. This thesis uses the subjective-based measures to assess the post-acquisition performance.

Finally the last section of this chapter presented empirical evidence of the various methods of measuring post acquisition performance, other studies on whether corporate takeovers are beneficial, and if so how these benefits are distributed between the parties involved. Most studies agree that acquisitions do not increase the wealth of the target's shareholders.

One needs to note that an important factor leading many M&A deals into failure is the lack of proper integration of the merged firms corporate culture (Stahl and Voigt, 2008)

The next chapter, Chapter 3, looks into the propositions and hypotheses that are pertinent to this thesis.

3. Propositions and Hypotheses

3.1. Introduction

In this Chapter the research hypotheses of the thesis are presented. Figure 3.1 shows the theoretical model upon which the study will be based. The model has been derived from the work undertaken from Capron (1999) as well as by subsequent reviewers and authors (Capron *et al.*, 1998; Capron and Hulland, 1999; Capron *et al.*, 2001; Capron and Pistre, 2002; Maksimovic *et al.*, 2011).

Specifically, the thesis examines the effect of the *post-acquisition measures* taken by the management of the acquiring firm, in terms of *resource redeployment* and *asset divestiture*, on the post-acquisition, long-run, performance of the merged firms. In the process, it is assumed that the effect of asset divestiture and resource redeployment is transmitted to post-acquisition performance through the two **mediating variables** of *cost savings* and *revenue enhancing capabilities*.

Cost-efficiency theories focus on cost savings resulting from an acquisition. In turn, these cost savings are achieved through *asset divestiture*. According to Capron *et al.* (2001), **asset divestiture** "is the partial or complete sale or disposal of physical and organizational assets, shut down of facilities and reduction of work forces of target and acquirer businesses." So asset divestiture may refer to the extent to which merging firms eliminate their physical assets, dispose of inefficient management (and management practices) and cut back their personnel in different areas, such as R&D, manufacturing, logistics, sales networks, and administrative services.

In turn, selling excess physical assets, laying off employees, and shutting down excess facilities may lead the (merged) firm to sell and produce goods more efficiently (Anand and Singh 1997; Andrade and Stafford, 2004; Krishnan *et al.*, 2007), and this improved efficiency, in turn, is translated into cost savings (Maksimovic *et al.*, 2011). Note, that improved efficiency essentially implies a better allocation of resources, mostly getting rid of inefficient resources.



Figure 3.1: The Theoretical Model of the Study Conceptual Framework

Source: Adopted from Capron (1999) and Capron et al., 2001

Alternatively, the *resource-based view* (RBV) of the firm (see Section 2-2) emphasizes the role of proper resource use, and resource redeployment, in providing the firm with a comparative advantage and hence boosts the revenues of the merged firm. **Resource redeployment** refers to "the extent to which a target or an acquiring firm uses the other firm's resources," such as R&D capabilities, manufacturing knowhow, marketing resources, supplier relationships, and distribution expertise (Capron, 1999, Gary 2005). Note, that resource redeployment can enhance revenue, either by increasing *market coverage* (through geographical extension of the market and product line expansion) or by improving *innovation capabilities* (through design cycle and R&D capabilities) (Capron, 1999).

Aside from the **direct** effects on the mediating variables (Section 3.2), asset divestiture and resource redeployment can have **indirect**, or **cross effects** on cost savings and revenue enhancement capabilities (Section 3.3). For instance, asset divestiture usually refers to changes in organisational, technological or marketing resources to generate and sell larger volumes of goods more effectively (Capron, 1999; Capron *et al.*, 2001). Hence, asset divestiture can be linked to revenue enhancement as well. In addition, the process of redeploying resources usually generates redundancies and divergences with current resources. The firm then is likely to sell extra physical assets, shut extra facilities, and lay off spare employees. Thus, resource redeployment may be linked to cost-savings (Capron, 1999; Capron *et al.*, 2001).

Further, the thesis examines how the aforementioned direct and indirect effects of *asset divestiture* and *resource redeployment* are modified in the presence of certain control variables (Section 3.3).

Finally, as it was discussed in Chapter 2 – section 2.8.2 – and by following Homburg and Bucerius (2006), the acquisition's long-term performance (which is what *asset divestiture* and *resource redeployment* are supposed to affect) is measured by **self-reported measures** of changes in market shares, sales, intrinsic profitability, and relative (to the industry's) corporate profitability. Other measures of assessing long-term performance include *market measures*, such as expected returns and realized returns (Sudarsanam and Mahate, 2006), and *accounting measures* (Zollo and Singh, 2004).

3.2. The Direct Effects of Asset Divestiture and Resource Redeployment

In Chapter 2 it was discussed that operating synergies are the most significant source of gains in an acquisition. Furthermore, it was argued that operating synergies stem from revenue-based synergies and cost-based synergies. Cost savings as a source of operating synergies consists of economies of scale and scope and asset divestiture. Also, revenue-based synergies comprise increased market coverage and innovation capability which both can be achieved in an acquisition through resource redeployment. In this Section, the creation of synergies through the effects of asset divestiture and resource redeployment on the post-acquisition performance of the merged firm is discussed.

3.2.1. Asset Divestiture and Cost Savings (Cost-Based Synergies)

Capron (1999) argued that in order for economies of scale and scope to be exploited in an acquisition process, generally it can happen so through asset divestiture. More specifically according to Scherer and Ross (1990), this divestiture would be possible without the need for an acquisition to take place, with the condition that the markets were efficient enough to regulate businesses into having their assets specialized. In particular, they argued that assets should be focussed in one or several activities according to their individual efficiency and have them produce competent plant investment, specialization or closure choices.

Additionally, acquisition literature regards asset divestitures as a failure of management to reap value from the transaction (Capron, *et al.*, 2001 Haleblian *et al.*, 2009). According to Haleblian *et al.*, (2009), this viewpoint disregards the presence of information asymmetries amongst managers and the market gives minor significance to any restructuring. Therefore, they suggest that there are potential benefits in investigating under what conditions firms can obtain valuable resources from acquisitions even if target assets are subsequently divested.

In an early study by Weston (1994) it was found that about 35% to 45% of all acquisition activities that took place during the period of 1980 to 1990 were divestitures of acquired entities by other businesses. Following an acquisition, a rigorous restructuring starts taking place that involves (among other things) a

significant number of sell-offs and closures of the target's assets (Maksimovic *et al.*, 2011).

In a study conducted by Krishnan, Hitt and Park (2007), using a sample of 174 related acquisitions which were completed in the period 1992-1998, found firms implemented large reductions of their workforce and accompanied by asset divestiture did not experience any decline in post-acquisition performance. They also argued that the combined firm has to create adequate synergy to produce returns that exceed the premium paid to acquire firms and one way of achieving that is by reduction in the workforce in order to gain economies and reduce costs.

According to Lee and Madhavan (2010), theories in management and finance are broadly unanimous in predicting that divestiture will lead to positive results. Specifically, the authors examined, in a meta-analysis comprising of 94 studies and 650 effect sizes, conducted over the period 1980-2007, the effect of asset divestiture on corporate performance. The authors made use of six moderating variables and in their meta-analysis found that divestiture following M&As improves corporate performance. Specifically, the weighted average of effect sizes was found to be 11%.

Furthermore, Maksimovic *et al.*, (2011) conducted a study of post-acquisition restructuring in the U.S. for the period 1981-2000. They found that while firms tend to retain plants in which they have a comparative advantage and improve their productivity and they tend to close or dispose all other plants. They concluded that on average acquirers recognise that it is beneficial to enter into-post acquisition restructuring which results in an improved allocation of resources.

In this thesis, as it can also be seen from Figure 3.1, value can be created in M&As by taking advantage cost-based synergies obtained through acquirer and target asset divestiture (Capron, 1999; Capron *et al.*, 2001). Also, by following Haleblian *et al.*, (2009) suggestion, asset divestiture can be viewed as an approach to effectively assess long-term acquisition performance and because, equally acquirers and targets can be subjected to asset divestiture the first set of hypotheses to be tested was formulated as follows:

Following an acquisition

- **Hypothesis H1a**:, the divestiture of the acquirer's assets improves the post-acquisition performance of the merging firms, through the achieved cost savings.
- **Hypothesis H1b**:, the divestiture of the target's assets improves the post-acquisition performance of the merged firms through the achieved cost savings.

3.2.2. Resource Redeployment and Revenue-Enhancing Capabilities (Revenue-based Synergies)

As it was argued in Chapter 2 (section 2.6.1) according to the *Resource-Based View* (RBV) of the firm, the resources (tangible and intangible) that a company possesses can determine its corporate performance (Newbert, 2007). An acquisition gives the acquiring firm the opportunity to shift its own resources or to use the resources of the acquired firm in a way to increase the merged firm efficiency. Put differently, *resource redeployment* following an acquisition should, boost revenues. However, there are questions concerning the way the newly acquired resources from an acquisition are expected to affect corporate performance (Priem and Butler, 2001).

Two ways of boosting revenues, through resource redeployment, involve (a) increased *market coverage*, and (b) *enhanced innovation capability* (see Fig. 3-1).

It was discussed in Chapter 2 (section 2.4) that one important motive for an acquisition has to do with entering a new market (Hagedoorn and Sadowski, 1999). But by entering a new market, a company increases its **market coverage**, provided the acquisition leads to geographic and product line expansion (Aaker, 1996; Srivastava *et al.*, 1998). Expanding across **geography** enables businesses to sell their products to whole new markets and in this way to increase revenues. Further, if the merged business deals with the exploitation of the strong reputation of a merging business brand, sales network or marketing activities, then the extension of the **product line** can improve profits (Capron and Hulland, 1999).

Firms, in order to successfully deploy resources so that they can differentiate at the product-market level, require marketing capabilities that assist them with conveying those benefits to customers (Vorhies *et al*, 2009). Srivastava *et al.*, (2001), argue that

to implement a broad product-market strategy efficiently, high levels of marketing capabilities are needed. Thus improved marketing capabilities can increase customer value, which can be consecutively turned into premium prices (Capron *et al.*, 1999; Barney, 1991; Srivastava *et al.*, 1998; Vorhies *et al.*, 2009).

Moreover, as it was argued in Chapter 2 – section 2.3.1.1 - firms by strategically using innovation, can achieve competitive advantage (Hitt *et al.*, 1998). It was also argued in (section 2.7.1) that an acquisition can take place simply for reasons of "**learning**" (Hamel, 1991; Bowman and Ambrosini, 2003). In this way, a firm has the opportunity, through the process of organizational learning, to improve its innovation capabilities when (a) it is exposed (after a successful acquisition) to a new corporate culture (Hitt *et al.*, 1996), and (b) makes use of the resources of the other firm. Innovation capabilities are further enhanced by **technological learning**, which one firm can acquire from another (Bierly and Chakrabarti, 1996). However, a critical consideration in technological learning has to do with the size of the knowledge bases of the two merging firms (Ahuja and Katila, 2001). Also, as it was discussed in depth in Chapter 2, international diversification is positively related to innovation (Hitt, *et al.*, 1994) and improved **innovation capability** can result into premium prices charged and/or increased sales volume and therefore to higher profits (Capron, 1999).

Despite the evidence in favour of using resources as a way to enhance corporate performance, the exact process that links the control of resources and superior corporate performance requires further examination (Sirmon *et al.*, 2007; Ndofor et al 2011). It is likely that the firm's actions (other than those of related to selection and use of resources) interfere with the final outcome (i.e. with corporate performance). Actually, few of the studies included in the meta-analysis of Crook *et al.*, (2008) looked into the exact process that translates control of superior resources into profitable performance.

Resource redeployment can be achieved without an acquisition provided that the market for resources allows the participating firms to exchange their resources (Capron, 1999; Capron and Hulland, 1999). However, because of the presence of numerous imperfections, such as immobility, information asymmetries and associated moral hazards, causal ambiguity and monopoly, the acquisition can be

considered the most "efficient" of acquiring productive resources (Williamson, 1975; Wan, *et al.*, 2011). Therefore, because of the market failure one can justify the use of M&A activity in order to achieve the goal of resource redeployment. At any rate, the second set of hypotheses that will be tested are the following:

Following an acquisition,

- **Hypothesis H2a:** the redeployment of the acquirer's resources to the target improves the long-term performance of the merging firms through improved revenue-enhancing capabilities.
- **Hypothesis H2b:**, the redeployment of the target's resources to the acquirer improves the long-term performance of the merging firms through improved revenue-enhancing capabilities.

3.2.3. Testing for Asymmetries between the Target and the Acquirer

Since post-acquisition *resource redeployment* and *asset divestiture* are employed in order to maximize the efficiency and effectiveness of the merged firm, it is rational to assume that the post-acquisition decisions should be jointly taken by the management of the merging firms (Chung *et al*, 2000).

However empirical evidence suggests that post-acquisition decisions will depend on the relevant position of the merging firms (Song *et al*, 2005), with acquiring firms having the "upper hand" in the decision-making process. Indeed, numerous studies have shown that acquiring firms tend to dominate the process of decision making (Pablo, 1994; Vaara, 2003; Birkinshaw *et al*, 2000). So, the process of postacquisition decision making cannot be viewed as a joint decision-making process between the managers of the two merging firms.

This domination, observed in the majority of M&A deals involving firms with related businesses activities, translates into the acquiring firm's managers reducing inefficiencies, not in their own firm but, in the target company (Walsh, 1988; Hambrick and Canella, 1993; Birkinshaw *et al*, 2000). Further, the acquiring firm's management team will frequently impose on the target the former's management style (Chatterjee *et al*, 1992; Hambrick and Canella, 1993).

All the preceding discussion concerning the differential power of the bidder to the target in the decision making process, also applies on the decision of redeploying resources. The acquirer seldom chooses to utilise its idle resources in the target and by doing so to eradicate its own resources. Therefore, in that process of selling off or eliminating the target's resources, acquiring firms tend to make choices that can have a negative effect on the competencies of the acquired firm, having as a result the target's ability to supply the acquiring firms with valuable resources (Ravenscraft and Scherer, 1987).

Based on the previous discussion, it is expected to find evidence indicating a differential impact (between the target and the acquiring firm) of post-acquisition actions (such as asset divestiture and resource redeployment) on post-acquisition behaviour (Capron 1999; Capron *et al.*, 2001) Hence the third set of hypotheses has as follows

Following an acquisition,

- **Hypothesis H3a:** the divestiture of the target's assets has a lower impact on cost savings than the divestiture of the acquirer's assets.
- **Hypothesis H3b:** the redeployment of the target's resources to the acquirer has a lower impact on revenue-enhancing capabilities.

3.3. The Indirect Effects of Asset Divestiture and Resource Redeployment

It was argued in Chapter 2 by using arguments inherent in the dynamic capabilities sustaining long-term competitive advantage lies in the recombination of assets and resources, which is resource reconfiguration (Abrosini and Bowman, 2009). Therefore, in acquisitions asset divestiture and resource redeployment can be viewed as parts of a shared process of reconfiguration of the **target** and the **acquirer** (Burgelman 1994; Galunic and Rodan, 1998; Capron, 1999)

Essentially, the set of research hypotheses H1 and H2 tests whether an acquisition can develop into a vehicle for acquiring (though resource redeployment) or selling bundles of resources (through asset divestiture) in highly imperfect resource markets, mainly for reasons either of control or knowledge (Mahoney and Pandian, 1992;

Capron, *et al.*, 1998). These resources are mainly non-marketable (Wernerfelt, 1984) and *intangible* in nature, such as intellectual property, know-how, and reputation; it is these resources that give the company a sustainable comparative advantage (Hall, 1993).

But acquiring new resources is one thing and another is to exploit their potential. Indeed, Arikan (2002) showed that firms that acquired valuable intangible assets, on average did not fare well in the long-run, compared with bidders that acquired valuable tangible assets. Further, there is evidence to suggest that the value of some intangible assets can only be tapped if these resources are combined with other assets (Brynjolfsson *et al.*, 2002).

In a study conducted by VanBeers and Sadowski (2003), a dataset of 2381 firms was utilised, that originated from the Dutch community Innovation survey for the period 1994-1996. Their results indicated that divestiture positively affects the probability to innovate when those innovations are "new to the firm". They argued that in both the manufacturing and the services industry a positive correlation exists between acquisitions and divestiture. Also, they suggested that acquisitions and in particular divestitures should be considered as part of corporate restructuring efforts towards innovation.

Asset divestiture can stimulate or deter a company's development (McKinley, 1993). One the one hand, downsizing enable firms to reduce unnecessary resources, thus allowing for a more productive resource allocation (Jensen, 1986). On the other hand, asset divestiture might lead to reduced innovation (Dougherty and Bowman, 1995; Hamel and Prahalad, 1994) and hence reduced revenue potential. Also, after a divestiture, due to the manager's being more conservative, this can be the result of job security concerns, may result to less internal innovation of the firm (Hitt *et al.*, 1996). Other potential drawbacks associated with downsizing involve stunting risk taking (Staw *et al.*, 1981), and violating employee trust (Shleifer and Summers, 1988). Hence, the fourth set of hypotheses has as follows:

Following an acquisition,

• **Hypothesis 4a:** the divestiture of the acquirer's assets has an effect on revenue enhancing capabilities (H4a).

• **Hypothesis 4b:** the divestiture of the target's assets has an effect on revenue enhancing capabilities (H4b).

Next, the potential indirect effects of resource redeployment were considered. The question whether resource redeployment increases or decreases operating costs remains a controversial one (Capron 1999). On the one hand, resource redeployment can increase costs, as the merging firms need additional resources, as their customer has expanded.

On the other hand, the exploitation of resource redeployment (through an M&A activity) may lead to improvements in cost efficiency (Teece, 1982, Panzar and Willig, 1981). For instance, if in the wake of an acquisition certain factors of production could be easily accessed (by the bidding firm) and be used in order to increase production efficiency, the operating production costs of the merged firm will decline. In all, cost savings arising from resource redeployment constitute a "dynamic" source of efficiency, contrary to the more static one due to economies of scale (Capron *et al.*, 1999). Hence, the hypotheses have as follows:

Following an acquisition,

- **Hypothesis 5a**: the **redeployment** of the **acquirer**'s resources to the target has an effect on **cost savings**.
- **Hypothesis 5b**: the **redeployment** of the **target**'s resources to the acquirer has an effect on **cost savings**.

3.4. Control Variables

Kunc and Morecroft (2010) argued that lack of an explanation in the decisionmaking processes in order to develop resources makes it hard to identify the origins of heterogeneity in firm performance and for practitioners to employ resource-based strategies. Therefore, by following the analysis of the various theories that concern and constitute the model and because of the nature of the dataset that is used, controls for other sources of possible heterogeneity are included. Those controls include payment method, target and bidder relative size, acquisition classification, relatedness, diversification, organisational changes and redundancies of senior executives. Each control variable is looked into detail in the following sections.

3.4.1. Payment Method

Consistent evidence has shown that cash-financed M&As are associated with better performance in both the short run and the long run (Cosh and Guest 2001; Linn and Switzer 2001; Loughran and Vijh 1997). The reasoning behind that might be that acquirers decide on the method of payment according to their expectations for higher or lower performance in the forthcoming period. Therefore the method of payment will be cash if the acquirers believe their shares are undervalued and equity if they consider their shares as overvalued

Also, cash payments may provide an indication to the market that the management of the acquiring firm anticipates an increase in the value of the firm over the post-acquisition period (Myers and Maijluf, 1984).

Mitchell *et al.*, (2004) in their work stated that business deals paid with equity will have as an outcome the break-up of the share price as the volume of outstanding shares raises, at the same time as the value of the firm stays the same until the anticipated synergies come into effect. One of the few studies which state positively significant announcement profits from equity transactions is the one by Chatterjee and Kuenzi (2001). They found that takeovers which took place between their study period (1990 - 1999) were dictated by bids for high technology firm. In addition they argued that in cases where equity payments occurred, they served as an incentive instead of a valuation indication to the market.

Furthernore, evidence reported from a sample of 179 successful British bids from Antoniou and Zao (2004), showed that equity bids have a tendency to under achieve considerably in the first and second years after the bid took place. Also there were no substantial abnormal returns for a combination of shares and cash and cash-only bids. Another view to the matter is taken by Moeller *et al*,. (2004), where they take into consideration the effect of size when evaluating the announcement effect of equity and cash bids. If large acquirers of public targets are paid with cash lose -0.75%, where as if they are paid with equity they lose -2.45%. The same holds for small acquirers, as there is a gain of 2.84% if they pay cash but if they pay with shares they

lose -0.42%. Bids funded with any method of payment except cash, lose -0.47% over a period of 36 months after the announcement (Conn *et al.*, 2005). Bids therefore funded with cash, experience trivial losses.

• Hypothesis **H6**: In general, the existing evidence in the literature suggests that payment method in any form, (i.e. cash, equity) affects the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.

3.4.2. Target and Bidder Relative Size

The performance of acquisitions could also be affected by the size characteristics of the target and the bidder firms. A number of reasons that might result in enhanced post-acquisition performance by acquiring larger targets have been put forward by researchers. First of all according to Bruner (2002), the economic effect of buying larger targets is likely to have a greater effect on the post-acquisitions bid performance of the merged firm. Secondly as indicated by Roll (1986) larger targets are trickier to be incorporated into a combined merged organization, so the number of prospective buyers is anticipated to be smaller. Therefore acquirers might end up being able to buy these large targets on more beneficial terms. Finally, dissimilarities that exist in studies analysing the effect of size are present, due to the various levels of carefulness implemented by smaller bidders in the acquisition procedure (Moeller *et al.*, 2004).

Furthermore, Franks *et al.*, (1991) constructed a sub-sample in relation to relative acquirer and target size and concluded that post- acquisition performance is considerably higher for bidding firms that acquire large targets.

O' Sullivan and Wong (1998) along with Powell (1997), further confuse the matter by stating that hostile acquisitions have a substantial larger capitalization instead of friendly targets. In these circumstances hostility may also to a certain extent explain the relative size effect found in the literature. Following Capron (1999) and Seth (1990b) there is an expectation that the relative size of acquirers and target favours the exploitation of operational synergies. • Hypothesis **H7**: The relative size of the target and the acquirer affects the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.

3.4.3. Acquisition Classification

As it was argued in Chapter 2 – section 2.2.2 - acquisitions are usually classified as being *hostile* of *friendly*. In **friendly takeovers**, the board of an acquiring firm has agreed to commend the approval of the bid to the shareholders. On the other hand when the situation is different, the commendation never happens in the first place, hostile bids arise.

Earlier studies on takeovers (Jensen 1988; Weisbach 1993) and then later in O'Sullivan and Wong (2005), suggested that managerial hostility (on the part of the target firm) toward an acquisition deal was likely to be motivated by managerial self-interest. In particular, it was suggested that managers resisting a bid were those who had underperformed in the past, and they were more likely to be replaced following a successful bid (Jensen, 1993; Manne, 1965). As a result, hostile takeovers were viewed as disciplinary device for target companies, whose top management had failed to achieve adequately the standard shareholder objectives (Tuch and Sullivan, 2007). Moreover, it seems that the relevance of hostile bids has decreased over time, as friendly acquisitions tend to be greater in number. In a study conducted by Andrade *et al.* (2001) on a total of 4,300 US acquisitions that took place in the period 1973-1998, it was found that hostile bids at any point fell from 14.3% of all cases in 1980-1989 to just 4% in the period 1990-1998.

Using the analysis in Chapter 2 (Section 2.2.2) different acquisition classifications will affect post-acquisition performance, thus acquisition classification was examined as a control variable.

• Hypothesis **H8**: Different classifications of acquisitions affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.

3.4.4. Relatedness and diversification

Prospective synergies between acquirer and target are a great incentive for acquisition activity, because they could eventually make available positive gains for shareholders.

In the case of acquisitions with dissimilar business activities it is more difficult for synergies to be detected. Singh and Montgomery (1987) state in their study that related acquisitions cater for larger economies of scale and scope, whereas unrelated ones are prone to end up with financial and administrative synergies. It is complicated to evaluate the performance of managers in diversified business structures. Studies can be found for both the short-run and the long-run. Earnings according to Morck *et al.*, (1990) tended to be higher for the period of 1980s than that of 1970s for related acquisitions. Their results provide weak support that diversifying acquisitions were considered to be more suitable during the 1970s.

Furthermore, Seth (1990b) argued that the possible synergistic gains are greater in large related acquisitions than in large unrelated ones. In addition congruent lines of business that exist within a firm have the ability to generate competitive advantage by allowing resource sharing (D'Aveni *et al.*, 2004). Therefore, opportunities for cost savings can be achieved through divestiture of redundant assets, as the degree of relatedness increases and from redeploying resources into new areas that can be more productive and potentially combining them with new resources (Capron *et al.*, 1998; Penrose, 1959; Teece, 1980, 1982).

Recent studies, dispute the idea that the performance effects of diversifying acquisitions are of such significance. The reason is that in earlier studies some support for a positive effect on wealth creation is found, through a better strategic fit between the target and the acquirer.

Additionally, Markides (1992, 1995) suggested that firm's benefit of diversification tend to decrease as they diversify further away from their core businesses. Pehrsson (2006) argued that a great degree of relatedness among firms has a negative performance. Firm's diversification beyond their optimal level according to Lee and Madhavan (2010) can be due to two reasons; first, managers pursue their own

interest and second, decrease of optimization level of diversification due to loss of control and information and market volatilities.

Moreover, in line with D' Aveni, Ravenscraft and Anderson (2004) reasoning, this thesis considers that sources of synergy that can create competitive advantage does not only stem from economies of scope but also from the same lines of business and congruent resources of the firms. Therefore two propositions can be formulated:

- Hypothesis **H9**: Different degrees of relatedness between the acquirer and the target affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.
- Hypothesis **H10**: Different degrees of diversification affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.

3.4.5. Organisational Changes

As it was argued in Section 2.5.1, one of the key elements in enhancing postacquisition performance of the acquirer is the top management team (TMT) of the target. According to the literature, the importance of the TMT stems from the possession of critical knowledge to the firms' current operations. As such, the removal of TMT managers can increase the level of disruption and ambiguity in the firm after the acquisition (Cannella and Hambrick, 1993; Krishnan *et al.*, 1997; Singh and Zollo, 1998). Organisational changes, such as in the composition of the acquired firm's TMT, can have a negative impact on post-acquisition performance of the firm (Kiessling *et al.*, 2008). Cannella and Hambrick (1993) argue that losing members from the TMT from the target will have a negative effect on the postacquisition performance of the acquirer.

This thesis considers five types of organisational changes. These are a) postacquisition organisational network changes, b) post-acquisition organisational knowledge changes, c) retention of the acquired firm's management team, d) formal organisational changes and, e) redundancy of senior executives.

According to Achrol, (1997), interpersonal networks of the managers' add value. In addition, Kiessling *et al.*, (2008) argued that successful companies have embedded

external and internal relationships of the management's network and signify a major contribution of sustained firm success. Undeniably, according to (Hakansson and Johansson, 1993) the multifaceted and flexible configuration of firms represent a network and personal interrelationships add value to the business. These interaction, are managed by the TMT by selecting suitable partners and looking after the relationships (Kiessling *et al.*, 2008).

Several authors dispute that knowledge and the capabilities that rely on it are considered as the key factor in establishing a firm's current and future value (Drucker, 1993; Grant, 1996; Hamel, 2000; Thurow, 1996). According to Grant, (1996) and Kiessling et al., (2008), knowledge has become known as one of the major strategic resources of the firm. Therefore, the TMT has implicit knowledge with regards to strategy, industry and the strengths and weaknesses of the firm. Furthermore in management literature the significance of the TMT of the target and its effect on performance has been well documented (Fiol, 1991; Kiessling et al., 2008; Lado and Wilson, 1994; Lee & Miller, 1999; Volberda, 1996). According to several studies the differentiation in culture and management approaches can have a major negative impact on acquisition performance (Buono, et al., 1985; Chatterjee, et al., 1992; Datta, 1991; Sales and Mirvis, 1984). In addition, differences in corporate cultures frequently result in distress and hostility during the post-acquisition phase and in particular when monitoring mechanisms are imposed by the acquirer (Kiessling *et al.*, 2008). In a study by Datta (1991) it was shown that differences in top management approaches have a negative impact on performance in both high and low levels of post-acquisition integration.

Therefore, given that organisational changes can have different effects on postacquisition performance:

• Hypothesis **H11**: Organisational changes affects the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.

3.4.6. Redundancies of Senior Executives

It was argued, that losing members of the management team from a target will lower post-acquisition performance. According to Kiessling *et al.*, (2008) comprehending

the reasons of how the disruption of the TMT with redundancies seem to hurt the development of new objectives and affect the target performance in the future. In addition, Grant, (1996) by borrowing from the knowledge-based theory argues that the management team builds up rules and directives to assist knowledge integration. Also, employees maintain knowledge assets that are not readily transferable. The redundancies of the target's executives have a negative effect on post-acquisition performance (Hambrick and Cannella, 1993). Therefore, it is disputed that the larger the number of redundancies of the management team the less effective the TMT will perform.

• Hypothesis **H12**: Changes in the number of senior executives made redundant affects the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.

3.5. Summary

In this Chapter the research hypotheses of the thesis were presented. Fig. 3-2 depicts the theoretical model upon which the study was based along with the all the research hypotheses that shall be tested. Essentially, this chapter presented the hypotheses that were formulated in order to examine the effect of post-acquisition behaviour (adopted by the management of the acquiring firm), in terms of *resource redeployment* and *asset divestiture*, on the post-acquisition (long-run) performance of the merged firms. In the process, it is assumed that the effect of asset divestiture and resource redeployment is transmitted to post-acquisition performance through the two mediating variables of *cost savings* and *revenue enhancing capabilities* along with seven control variables (payment method, relative size, acquisition type and classification, relatedness and diversification, organisational change and number of executives made redundant).

In the next Chapter, issues relating to the design of the study and the data collection process were looked into, issues related to the research design, and the design for the data collection process. Finally, in the next chapter the sampling methods for obtaining the sampled data, and the methods of analysis used to analyse the collected data are discussed.



Figure 3.2: The Theoretical Model of the Study Hypothesised Framework

Source: Adopted from Capron (1999) and Capron et al., 2001

All of the previous hypotheses are summarised in Table 3.1 which presents all of the hypotheses concerning the latent variables (H1 to H5) along with the control variables of the study (H6 to H12).

Hypothesis	Description		
H1a	Following an acquisition the divestiture of the acquirer's assets improves the		
	Following an acquisition the divestiture of the target's assets improves the		
H1b	post-acquisition performance through cost savings		
H2a	Following an acquisition the redeployment of the acquirer's resources to the target improves the post-acquisition performance through revenue-enhancing canabilities		
Н2Ъ	Following an acquisition the redeployment of the target's resources to the acquirer improves the post-acquisition performance through revenue- enhancing capabilities		
НЗа	Following an acquisition, the divestiture of the target's assets has a lower impact on cost savings than the divestiture of the acquirer's assets		
H3b	Following an acquisition the redeployment of the target's resources to the acquirer has a lower impact on revenue-enhancing capabilities		
H4a	Following an acquisition the divestiture of the acquirer's assets has an effect on revenue enhancing capabilities		
H4b	Following an acquisition the divestiture of the target's assets has an effect on revenue enhancing capabilities		
H5a	Following an acquisition, the redeployment of the acquirer's resources to the target has an effect on cost savings		
H5b	Following an acquisition the redeployment of the target's resources to the acquirer has an effect on cost savings		
H6	Payment method affects the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance		
H7	The relative size of the target and the acquirer affects the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance		
H8	Different classifications of acquisitions affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.		
Н9	Different degrees of relatedness between the acquirer and the target affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance		
H10	Different degrees of diversification affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance		
H11	Organisational changes affects the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance		
H12	Changes in the number of senior executives made redundant affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance		

4. Empirical Approach: Research Design and Methodology

4.1. Introduction

The previous chapter presented the research model along with its associated variables and constructs as well as a number of propositions and hypotheses. Chapter 3 focused on the methodology and the empirical approach used in the study which set the foundations for the research and methodology necessary to examine the conceptual model of the thesis. This chapter addresses issues relating to the research design of the study and the data collection process. Specifically, section 4.2 presents topics regarding the theoretical foundations of business research. Section 4.3, reviews and presents survey methods, research design approaches, scales and data sources commonly employed by the literature. Section 4.4 presents the web survey process and methods for obtaining the data. Section 4.5 discusses the creation of the thesis' questionnaire with its pre-testing stages, the sampling frame and statistics regarding the response rate. Finally, section 4.6 discusses the methods of analysis used for the data, along with the methodological framework adopted for the purposes of the statistical analysis.

4.2. Theoretical Foundations of Business Research

This section considers a number of philosophical issues pertinent to research projects in social science and, more particularly in the field of business and management. Therefore, subjects relating to epistemology, scientific theories and their creation, will be examined, along with a short introduction on the notion of constructs and variables and their associations in research models.

Given that the process of undertaking a research project involves exploring something novel, or aims to confirm or refute something old (either natural or social), subsequent concepts and construct are needed that can explain the event being surveyed. Several approaches for classifying research with the most direct being the dichotomy of empirical versus theoretical (Miller and Tsang, 2010)

Empirical research is based on observations or experiments, while, on the contrary, theoretical research can be described as an intellectual interpretation of constructs and their relationships. Despite the fact that purely theoretical or empirical research

approaches are rather rare, the former is the prevailing approach in the business field. At this point, it should be pointed out that there is no data collection exercise (empiricism) without a corresponding theoretical framework. As such, the classification of research into the approaches mentioned above – empirical and/or theoretical – mainly based upon the perspective that the researcher is taking to analyse the social phenomena.

Even though the aim of this thesis in not to discuss in detail what *Philosophy* is, it is important to point that different positions in the philosophy of science can be classified with respect of how the deal with questions of meaning (ontology) and knowledge (epistemology) (Kilduff *et al.*, 2011). **Ontology**, according to Corbetta (2003) is the part of philosophy that studies the essence of being; its roots derive from two Greek words "ontos" (to be, being) and "logos" (account or theory).

The definition of **epistemology** derives from the two Greek words "episteme" (science or knowledge) and "logos" (account or theory). According to Kilduff et al (2011 pp.299) epistemology concerns how one gains access to knowledge and the relationship between knowledge and truth.

According to Miller and Tsang, (2010), the most important philosophies of science in management studies that a researcher can employ are the critical realism, positivism, constructivism, interpretivism and pragmatism.

Critical realism is considered as an expanding advancement altering the intellectual scene (Fleetwood, 1999; Tsang and Kwan, 1999). Critical realism is based according to Tsang and Kwan (1999) on three assertions. Firstly, instead of empirical events, the reality that scientific theories principally aim to represent is the structure and mechanisms of the world. In this instance, structures are defined as groups of internally related objects and instruments as means of acting (Sayer, 1992). At the same time, objects are internally connected to a structure in a way that their identity lays upon their relationship with other components of the structure (Tsang and Kwan, 1999). Secondly, the principal structures and mechanisms are only liable to occur, in relation to observable empirical events, but not with certainty. Thirdly, even though, scientific knowledge of reality can be unpredictable, there is still a possibility of

acquiring such knowledge via creative construction and critical testing of theories (Tsang and Kwan, 1999).

Positivism, according to Corbetta (Corbetta 2003, pp.13) is:

"the study of social reality employing the conceptual framework, the techniques of observation and measurement, the instruments of mathematical analysis and the procedures of inference of the natural sciences".

Also, positivism can be viewed as the pursuit of regularities and causal relationships between basic components and that is usually realised through the methodological procedures of quantitative data collection and statistical analysis (Shah and Corley, 2006). It is argued, that the only way for social science to be able to reach the accomplishments of natural science in explanation, prediction and control is by enforcing the methods of natural science (Lee, 1991). In the positivistic paradigm, criteria of validity and reliability are employed 'to measure the extent to which our theories and instruments correspond to objective reality' (Sandberg, 2005, p. 43).

Constructivism is considered as a school of philosophical thought disputing that research is essentially theory-dependent (Mir and Watson, 2000). The theoretical view that is considered by researchers as it is argued by constructivists directs their basic position but at the same time predetermines what is being interpreted as a research problem, what theoretical procedures are utilised and what creates observation and evidence (Boyd, 1991, pp.202). Constructivism, therefore questions the notion that research is performed by impartial detached, value-neutral subjects, that pursue to uncover clear distinct objects or phenomena (Mir and Watson, 2000). Constructivism, according to Mir and Watson (2000), does not question the presence of phenomena, it questions however the researchers ability to comprehend them without a specific theory of knowledge.

Interpretivism refers to a school of thought that believes that people, and the physical and social artefacts they generate, are in effect dissimilar from the physical reality investigated by natural science (Lee, 1991). In intrepretivism the objective of theory building is to create descriptions, perceptions and explanations of events so that the system of interpretations and meaning and the methods of organizing and structuring are revealed (Gioia and Pitre, 1990). In addition, using the interpretive

paradigm researchers, try to represent phenomena with as less a priori ideas as feasible (Gioia and Pitre 1990). As in the positivistic paradigm, for interpretive approaches criteria for validity and reliability exist even if they are different, however their recognition and status are nowhere near the prestigious position held in the positivist research (Heil and Whittaker, 2007)

Pragmatism's interpretation according to Wick and Freeman, (1998), lies in accord with the anti-positivists, that it rejects the privileged status of science. Even, though that science is very useful and powerful, is viewed as only one more technique for dealing with the world (Wicks and Freeman, 1998). According to Powell's (2002) meaning of the pragmatist theory:

"if a strategy proposition stimulates results on the dimensions we value, then we make it our own" (Powell, 2002, pp.879).

Constructing theory is viewed as an on-going pragmatic process of "puzzling out" and of resolving problems that utilises ways of understanding what the phenomenon "is a case of" (Timmermans and Tavory, 2012; Winship 2006).

Following the analysis of the philosophical paradigms in management science, it is clear that each one has different virtues and vices. However, deciding and laying down the ground of the epistemological paradigm of the thesis is vital because it embodies the philosophical basis of knowledge that the researcher is pursuing, so that the research questions can be answered. Given this thesis empirical and ontological framework, this thesis is based on principles of positivism since it seeks to test a number of relationships among the principal constructs. In addition, because of the M&As are considered external realities that exist in the world and these realities are considered as the drivers to examine this phenomenon the primary ontological assumption of the study is critical realism.

Considering the above, it is crucial to analyse the importance of theory generation, growth and development; the latter being the main exercise of the following section.

4.2.1. Matter of Science, Theory, and Theory Development

Prior to analysing the various theory building research approaches usually applied in management and human resources development, an effort should be made to provide working definitions of the key terms and concepts that are pertinent to these approaches.

4.2.1.1. Definitions of Theory and its concepts

For the purposes of the current discussion the thesis opts for the definition offered by Shapira (2011, pp.1313), namely:

"theory is commonly defined as an analytic structure or system that attempts to explain a particular set of empirical phenomena"

This definition mirrors the etymology of the word from the Greek "thea" (view) and "oros" (seeing). From Dubin's (1976) perspective, theory building in applied fields is usually conducted in a deductive manner. According to Dubin, a theory's origin must start with the real world ("observation and description of the real world are the essential points of origin for theories in applied areas") and continue with a theory-to-research, or "theory-then-research" (Reynolds, 1971) strategy for theory development and verification.

Also, Dubin (1978) argued that it is a necessity for theorists and practitioners to have a positive working association in order to develop and exercise the theory since they have different perspectives. For theoreticians the main area of concern is to make sense of the unknown, while practitioners need to provide a solution to the problem Storberg-Walker (2003).

Whetten (1989) has proposed an alternative representation for the theory development side. Specifically, a complete theory must comprise four essential elements:

1. What, i.e. which factors (variables, constructs, concepts) logically should be considered as part of the explanation of the phenomena of interest. The factors should meet two criteria: comprehensiveness and parsimony.

- 2. How. Having identified a set of factors, the researcher's next question is, how they are related. Such a step adds order to the conceptualization by explicitly delineating patters. In addition, it typically introduces causality. The combination of the What and How elements constitutes the domain or subject of the theory.
- 3. Why. Refers to the identification of the underlying psychological, economic, or social dynamics that justify the selection of factors and the proposed causal relationships. This rationale constitutes the theory's assumptions the theoretical glue that welds the model together.
- 4. Who, where, when. These conditions place limitations on the propositions generated from a theoretical model. These temporal and contextual factors set boundaries of generalizability, and as such constitute the range of the theory.

4.2.2. Constructs and Variables

Construct Measurement is of major importance to strategic management researches. (Boyd *et al.*, 2013). Constructs can be defined as abstract theoretical formulations about phenomena of interest (Edwards and Bagozzi, 2000; Morgeson and Hofmann, 1999). Nevertheless, a construct commonly is formulated so it can be measured, its main purpose is to describe a domain of attributes that can be operationalized and preferably quantified as variables (Gioia *et al.*, 2013). Also, even though the conception of a variable is employed in other disciplines such as mathematics and statistics, is a relatively simple idea and essentially is the contrary of a constant.

Figure 4.1 presents an association between constructs and variables. This figure which was adopted from Boyd *et al.*, (2013: pp.6) the upper portion of the figure is a combination of Blalock's (1979) and Bacharach (1989) framework for examining social processes.

The process is broken down to three components. The upper side of the diagram indicates the first stage where propositions are used to combine two or more constructs, while hypotheses are used to associate two or more variables. This is represented by the path between the two constructs (Hypothesis Proposed). As such this process takes place at a theoretical level and it is not tested directly. The second

stage takes place at the indicator /variables level and is the operational link between the constructs. This is depicted in the diagram with the path between the two indicator/variables (Hypothesis Tested). The third stage involves around the relationship between the constructs and the indicator/variables.



Figure 4.1: Components of a Theory

Adopted from Boyd et al. (2013), Bacharach (1989:499), Blalock (1979) and Venkatraman and Grant (1986)

Conventionally, one the hand indicators are presumed to be driven by constructs which are known as reflective indicators. On the other hand, indicator can shape the construct, identified as formative indicators (Boyd *et al.*, 2013).

In the definition provided by Edwards and Bagozzi, (2000), construct is a conceptual term that researchers delineate to illustrate a real phenomenon and is unobservable by nature. Therefore, a problem arises in reference to the predictive validity framework (Hamman et al, 2013). Two levels are identified within this framework, the conceptual level and the operational level (Bisbe *et al*, 2007). For the conceptual level relationships between constructs through propositions are rationalised theoretically, whereas for the operational level, these propositions are empirically tested (Hamman et al, 2013). Consequently the link between constructs and indicators needs to be carefully established in order for empirical findings at the operational level to be applied to test theoretical propositions established at the conceptual level.

Also, Venkatraman and Grant (1986) and Venkatraman (1989) were critical involving most aspects of construct measurement in strategic management studies. Specifically, they raised their concerns about reliance on categorical variables, use of single indicators, inadequate assessment on reliability and ambiguity regarding levels of measurement (Boyd *et al*, 2013). Moreover, Schwab (2005) argued that construct validation or measurement research revolves around the relationship "between the results obtained from measures and the concepts or constructs the measures are purported to assess".

Therefore, validity assessment for the purpose of integrating strategy concepts with their measures is of major significance (Boyd *et al* 2005a). Table 4.1 presents the main components of construct validity as they were portrayed in Figure 4.1 on the lower box within the figure.

Construct Validity	Description	Relevant techniques /
		analytical framework
Content or Face	Extent to how closely an	Review by "experts" and
Validity	indicator engages with the	analyses of the extent of
	theoretical framing of a	consistency among them
	construct	
Internal Consistency		
Dimensionality	Extent to which the items	Exploratory factor analysis;
	reflect one underlying	Confirmatory factor

	construct	analysis.
Reliability	Absence of measurement error in cluster score	Cronbach alpha; Reliability coefficient of structural equation models
Convergent Validity	Different measures of the same construct show similar patterns of behaviour	Correlation analysis Structural equation methodology (SEM) - confirmatory factor analysis
Discriminant Validity	Extent to which a concept differs from other concepts	Correlation analysis; Structural equation methodology.
Nomological (Predictive Validity)	Degree to which predictions from a theoretical network are confirmed	Correlation; Regressions; Causal modeling

Table 4.1: Key Components of Construct Validity

Adopted from Venkatraman & Grant (1986:79)

Content or face validity refers to the extent that empirical measurement reflects a specific construct (Venktraman and Grant, 1986). Validity in this study, was achieved by communicating, during the pre-testing phase, all the relevant proposed items to managers and experts in their field, whom in turn provided remarks and comments on these. Evidence of that are presented in Section 4.4.2.4

Internal consistency comprises two significant components; dimensionality and reliability. *Dimensionality* is concerned with the extent to which the various items reflect one underlying construct. Validity check has been taken into account by carrying out exploratory factor analysis, which is presented in detail in Chapter 6.

As far as *reliability* assessment is concerned, in the strategy and marketing literature, the Cronbach's alpha coefficient has commonly been used as a test,. If Cronbach's Alpha is above or close to the 0.7 threshold it is suggested that all of the items are reliable and the entire test is internally consistent (Cronbach 1951, Hair et al 2010). The results are presented in detail in Chapter 6 (Section 6.4).

Convergent validity refers to the extent that different methods of measuring the same concept yield similar results (Venkatraman and Grant, 1986). In order to assess convergent validity construct loadings and average variance extracted (AVE) are examined. Those results are also presented in Chapter 6 (Section 6.4.1)

Discriminant validity is concerned with the extent to which a concept differs from other concepts. AVE estimates should be greater than the square of the correlation between that factor and other factors to provide evidence of discriminate validity. Results of discriminant validity are presented in Chapter 6 (Section 6.4.1)

Nomological (predictive, criterion, concurrent or pragmatic) is concerned with the degree to which predictions from a theoretical network are confirmed. Correlations regarding nomological or predictive validity are presented in Chapter 6 in detail.

The way in which theories and models are assessed is an issue of great importance. The fact that researchers and theorists, constantly attempt to improve existing theories gives rise to the complex question of truth and the criteria for evaluation of theories. According to Bacharach (1989), 'falsifiability' and 'utility' ought to be the two criteria that theory is evaluated by. On the one hand falsifiability holds that theories are stated in such a way that their empirical examination is feasible. Utility, on the other hand, is concerned with how practical a proposed theory can be, which is ultimately associated with the explanatory and predictive power that the theory possesses.

4.3. Research Design

According to Churchill (2005) the **research design** refers to an overall strategy that facilitates the process of data collection and their subsequent analysis. The three main types of research design in social sciences are the *exploratory*, the *descriptive*, and the *causal* (Ghauri *et al.*, 2005).

The **exploratory research** design is predominantly used in situations where primary ideas and insights to a research problem are necessary. This kind of research approach is particularly useful for clarifying concepts when they are poorly understood or developed, yet is not suitable for testing hypotheses. Exploratory approach designs appear often in a basic form of research that might use literature

and/or experience surveys as a source of preliminary understanding of researchers (Kidder, 1991; Aaker and Day, 2007).

The **descriptive research** design is used in instance that that a study tries to a) portray the characteristics of a one group or various groups, b) approximate a percentage of subjects behaving in a particular way or, c) predict results in some way. Assuming that these designs can be organised, descriptive studies can be implemented for hypothesis testing to lay the ground of theory building (Dubin, 1978). Also, descriptive approaches can be classified in relation to their longitudinal or cross-sectional design. Taking into consideration the work of Churchill, (2005) and Kinnear and Taylor, (1996) longitudinal criteria are dynamic and are based upon approaches where data derive from a fixed sample of estimates and are constantly measured. At the same time, pattern that are cross-sectional are static and related to a section of units from a population that is measured over a period of time.

Finally, the **causal research** design aims at separating cause(s) and determining the extent to which such cause(s) relate to effect(s). Furthermore, the causal approach design dictates that the researcher uses one or more independent variables to measure the effect(s) of the former on the dependent variable(s) (Kerlinger, 1986; Nagel, 1961; Popper, 1955; Stolzenberg and Land, 1983).

This study examines how value is created in acquisitions, and, in particular, analyses the impact of post-acquisition asset divestiture and resource redeployment on the post-acquisition performance. Thus, the most appropriate research design for the purposes of this study is considered to be the combination of *descriptive* and *causal research* approach.

4.3.1. Time frame employed in Research Design Approach

An additional property that can characterize a research design and therefore categorize it, is the time frame employed. There essentially exist two major methods; **cross-sectional** and **longitudinal**. Whilst there are several strong reasons that longitudinal design can cater for an enhanced perception of the phenomena under investigation, because of time and budget restrictions in addition to career pressures have forced the majority of the researchers to adopt a cross-sectional approach (Churchill, 2005).

4.3.2. Deciding over the Research Design Approach

The conceptual model of the thesis (Chapter 2), as well as the hypotheses of the study (Chapter 3) was considered when selecting an appropriate research design. This study investigates how value is created in acquisitions, and, in particular, analyses the impact of post-acquisition asset divestiture and resource redeployment on the post-acquisition performance. Thus, the most appropriate research design for the purposes of this study is considered to be the combination of *descriptive* and *causal research* approach. In addition, the type of descriptive study employed is a **cross-sectional** one.

4.3.3. Data Collection Process

Another area where attention is deemed necessary is the data collection process. Figure 4.2 and Table 4.2 depict the various approaches that are available to a researcher for collecting primary data.

Data sources are usually divided into two major types, the primary and secondary data. *Primary* sources of data refer to the generation of data that specifically relate to the research question, whereas *secondary* sources of data can be described as data that has already been generated and published for research purposes other than the research question at hand (Tull and Hawkins, 1990). Churchill (2005) provides a comprehensive list of potential secondary sources such as central and local government reports, reports of institutions and departments, and any kind of published material. Secondary data seem to have obvious potential advantages; yet, this study uses primary data as no sources of data are readily available and those that exist are not sufficient to fulfill the data requirements needed by our empirical research.

Primary data can be collected by utilizing three types of sources; respondents, analogous situations and experimentation (Kinnear and Taylor, 1996). As far as the thesis is concerned, the analogous situation and the experimental design sources were disregarded because of the existence of a number of methodological limitations and their perceived lack of effectiveness. Therefore the respondent source of data was considered as the most suitable source of data.

Gathering primary data from respondents requires the adoption of an accepted collection method. The main methods for collecting primary data from respondents (Figure 4.2) involve *observation techniques, interviews* (personal and telephone), and *questionnaires* sent through post or web surveys (Dillman *et. al.* 2009). On the one hand, **observation techniques** involve the recording of an event of behaviour as it occurs; in this case the respondent is considered to be passive, as he/she does not interact with the investigator in a direct way, whereas, in *interviews* and *questionnaires* the respondents are directly questioned and have an active role in the data generation process (Parasuraman, 1986).



Figure 4.2: Research Approaches for Primary Data Adopted from Dillman et al 2009

Observation and interviews are the two methods that can be employed by the researcher for primary data collection. When the observation method is to be used, both human and mechanical techniques can be employed. Thus, by using this approach, the researcher has the option of engaging in laboratory experiments where artificial conditions are created for the event under investigation or the field approach can be employed, where the observation take place whilst the phenomena is occurring.

Table 4.2 provides a detailed account of the various advantages and disadvantages of some of the communication methods used in collecting primary data. In this thesis the chosen method for collecting primary data was the web survey. The rationale behind the adoption of both approaches is the complementarities they produce. For example, the web-survey method is inappropriate when respondents have limited access to the internet or to a computer.

Interviews	Disadvantages	Advantages
MAIL	Non -response bias	Money and time savings
	Several Questions unanswered	No-interview bias
	Low response rate	Greater assurance of anonymity
		A great deal of respondents can
		be reached
WEB	No internet access	Shorter transmitting time
SURVEYS	Low response rate	Decreased delivery costs
		Additional design options
		Reduced data entry time
PHONE	Potential Sample Bias	Imperative Nature of the
	Negative Impact of Demanding	Telephone
	Nature	Interviewer Control
	Limited Interview Length	Sample
	Inability to Show, Display	Response Rate
	Materials	Speed & Interviewing Costs
PERSONAL	Demand a skilled and cautious	Accurate and clear picture of
	interviewer	respondent's position or
	Problem of interviewer's	behaviour
	objectivity	

Table 4.2: Advantages & Disadvantages of collecting Interview Data

Taking into consideration the advantages and disadvantages of the different data collection methods, the theoretical model, the hypotheses developed and finally the research objectives, a descriptive, cross-sectional approach with primary data, through the use of a web survey was adopted.

An additional major issue relating to the data collection approach concerns the type of data the researcher is trying to gather. In this respect, two main approaches have been adopted in the literature; the subjective and the objective (Sathe, 1978; Boyd et. al, 2013).
The subjective approach is based on the perceptions held by the respondents in relation to the organisational phenomena, whereas, the objective approach is based on information acquired through documents, or available statements. Considering the limitations of both approaches, Sathe (1978) proposed that the objective approaches should be renamed to institutional and the subjective approaches from subjective to questionnaire.

According to a literature review conducted by Meglio (2009), there occurs a polarization around quantitative studies based on small and large samples where 22 of them involve the use of secondary data and only 8 include a survey. Additionally, seven qualitative studies discuss findings from within and cross-case analysis. The author also affirms that mixed method research remains rare in M&As. Moreover, Boyd *et al*, (2013) argue that taking into consideration the readily available archival data sources and combining with the difficulties of obtaining original data from top executives, it is normal that qualitative designs are seen less frequently in strategic management studies.

Nonetheless, it has not yet been irrefutably suggested by researchers that one approach is more reliable or preferable over another. In this study the questionnaire (or the subjective) approach is adopted due to the nature of the constructs.

4.3.4. Scales

In addition to considering the testing of the hypotheses, the measurements of the variables also need to be considered. The reason being is that the levels at which the variables are measured govern the statistical test used for analysing the data. Two categories of data according to their attributes/characteristics are recognised; nonmetric (qualitative) and metric (quantitative). There are four types of scales that exist in the literature, nonmetric measurement scales are the nominal and ordinal scales and for the metric measurement scales are the interval and ratio scales (Ho 2006; González-Rodríguez, 2012). Therefore, there are different forms of measurement precisions for each scale type.

The **nominal scale** is the simplest level of measurement and classifies the variable under investigation into one of a number of discrete categories (Ho, 2006). Although the allocation of numbers can be used to describe categories, they are only used to label these categories and they do not possess any quantitative value with respect of magnitude (Allen and Seaman, 2007).

The **ordinal scale** involves ordering or ranking the variable to be measured. Even though, ordinal scales rank differently the variables under examination they cannot determine how much of a that difference really occurs in the measured variable between ranks (i.e. the intervals within those ranks have no meaning) (Ho 2006)

The **interval scale** specifies how far apart two stimuli are on a given dimension. An interval scale is used when subjects vary in an amount or degree on a particular attribute (Hair et al 2010).

The **ratio scale**, substitutes the arbitrary zero point of the interval scale with a true zero as a starting point (Ho 2006). The only distinction between interval and ratio scales it that interval scales use an arbitrary zero point, while ratio scales include an absolute zero point.

The nominal scale produces the least accurate measurement and the most precise is provided with the ratio. Likert (1932) developed one of the most widely used scales in research. His technique involved an increase in the variation in the probable scores that a respondent had to choose from. According to Bailey (1982), researchers have always been using the Likert scale as an interval approximation, even though it is an ordinal one. Osgood (1957) developed an analogous method labelled *Semantic Differential*. This method utilises a seven point scale using a range between two extremes while at the same time the middle is viewed as neutral point. In most cases, the two extremes do not range from "strongly agree" to "strongly disagree", but possess points that can describe various situations.

Furthermore, as far as the number of points is concerned, it should be mentioned that the use of five or seven point scales did not produce conclusive results (Dillman, (2009). According to Churchill and Peter (1993) improved reliability and validity could be achieved by increasing the number of rating points, while as indicated by Boote, (1981) and Lehman and Hulbert (1972), there is a concern regarding the increase of the number of the rating points. Also, according to Dillman (2009) for scales that measure different levels of intensity (i.e. very, somewhat) the optimal number of response categories is five or seven, because it allows for two or three levels of differentiation on either side of the middle or neutral category.

Taking into consideration the relevant literature as mentioned above and the guidelines proposed by Dillman (2009) as well as the findings and recommendations from the pre-testing phase, a five point scale was used for the questionnaires. In the thesis, a descriptive approach was used, on the primary data with a five point scale (both Likert and Semantic) and the use of the subjective (questionnaire) approach was employed.

4.4. The Web Survey

This section, discusses certain issues pertaining to web surveys as a method of collecting primary data. In particular, delves into areas such as the choice of the web survey process, the content of the pre-notification emails and reminders, signature and affiliations, the length, wording and sequence of the various questions.

The use of surveys has been employed by scholars and agencies in order to gather data for a long time. Online/web surveys have increased in number in recent years. One of the reasons for the increase can be attributed to the relatively low cost at which they can be carried out at and within a shorter time frame than their paper-based or telephone equivalents (Sauermann and Roach, 2013).

Web surveys have to be designed with different operating systems and browsers in mind and prevent multiple submissions (Yun & Trumbo, 2000). In addition, question in web surveys have to be presented in a logical or adaptive manner, if needed (Kehoe & Pitkow, 1996), and must provide the respondent with several opportunities for saving the completed answers (Smith, 1997). Moreover, Web surveys should provide options for both quantified selections option and narrative type answers (Yun & Trumbo, 2000), and, present the respondent with a section for feedback and a section for "thank-you" upon completion of the survey (Smith, 1997). Finally, the format of web survey can accommodate the guideline of paper questionnaire design (Dillman, 2009; Preece et al, 2002).

4.4.1. Web survey process

At first, many aspects of web survey implementation appear rather similar to those used for mail implementation. Nevertheless, the two methods employ different technologies and thus web implementation has to be handled in a different manner than mail. Figure 4.3 shows that there are four basic steps in the process of carrying out a web survey.

The first step is the *web survey development* (Section 4.4.2) which is concerned with the web survey design and development as well as the process of uploading the web survey to a website. This step includes the development of the questionnaire and the pretesting procedures.



Figure 4.3: The Web Survey Process

The second step is the *web survey delivery* (Section 4.4.3) and deals with the process used by surveyors to produce a sampling method, make contact with potential participants and convey the web survey to the respondents. In this step the prenotification/invitation emails are a vital part of the delivery process.

The third step, *web survey completion* (Section 4.4.4) has to do with the actions that the surveyors take in order to confirm respondents received the survey announcement, logged into the website the survey is hosted, filled in and submitted the questionnaire and logged out. In this step the reminder is an important component.

Adopted from Fan and Yan (2010)

The final stage, *web survey return*, (Section 4.4.5) revolves around the process of downloading web survey data in various formats for analysis.

4.4.2. Web Survey and the Questionnaire Development

The questionnaire's construction and development phase lasted approximately six months; from mid-January 2010 to mid-June 2010. More than 14 versions through revisions were produced in order for the questionnaire to take its final form. This section provides an account on the physical properties of the questionnaire, such as the length, colour structure, font types and the type of questions used.

4.4.2.1. Length of the Questionnaire

In the literature it is observed that the size of a survey has a negative linear relation with response rates in both mail and web surveys, even though the size of those effects span from strong to very weak (Cook *et al.*, 2000; Edwards *et al.*, 2002; Walston *et al.*, 2006). Also, it was examined among two studies conducted with college students that thirteen minutes or less for the completing the survey was deemed as the ideal time frame to obtain a good response rate (Asiu, *et al.*, 1998; Handwerk, *et al.*, 2000). According to Dilmann (2009) web questionnaires of up to 12 pages have no adverse effect on response rates.

The questionnaire used in the thesis (see Figure I.1, Appendix I) consists of a total of *10 pages* and contains seventy three items; based on approximate value produced by the website (www.surveymonkey.com) the questionnaire takes an average time of twelve minutes to complete. The first page included the title of the project, and approximately nine lines of text explaining the main objectives of the study, offering broad guidelines to the respondent and reinforcing the sensitive issue of confidentiality. Page nine (last page) of the questionnaire provided free text space in the case that respondents to a) attach their business cards and/or b) to provide their address. Finally, the questionnaire concluded with some words of gratitude for the respondents' invaluable support. To structure the first and the last page of the questionnaire, the guidelines of Dillman (2009) were followed.

4.4.2.2. Types of Questions

The questionnaire used in this thesis predominately used closed-ended questions with ordered answered choices. Five - point (5) scales (Likert and Semantic) were used throughout the questionnaire. In order for the questionnaire to be well structured and maintained, the wording of the questions was an important factor, thus the questionnaire was structured so as to avoid using leading questions, generalisations and ambiguous expressions (LaGrace and Kuhn, 1995; Greer *et al.*, 2000). The sequence of the questions was developed with the thesis's research model in mind and following the suggestions of the pre-testing interviews.

Element	Aim	Guidelines
Survey	Includes the uniform resource locator (URL)	
Invitation	and instructions of how to access it.	Should contain
First Page		Should contain: Graphic Illustration, Confidentiality Directions, Study Title, Sponsor name Contact information Should not contain;
Lost Dogo		Questions
Last I age		<i>Should contain:</i> Encouragement for comments, A Thank you note, plenty of writing space
Format	Should provide clues of the worthiness of the	Should:
	questionnaire	Consistent page layout across screens
		Should not contain:
		writing in capital letters, using acronyms
Questions	Should provide respondent with a guide of the questionnaire, communicate an impression of orderliness and ease of	
	completion	Should:
First Question		Be in relation to the survey topic, Be easily answered, Convey a sense of neutrality, Applicable to everyone <i>Should not:</i>
		Be an innocuous Ice-Breaker
Remaining Questions		<i>Should:</i> Be ordered in descending social usefulness, grouped by content and type, end with most potentially objectionable questions
		Should not: Require constant mental switching between question types

Page Format	Should motivate completion and appear easy to do so	Should Contain: Plenty of White Space, Have Directions in Parenthesis, Vertical Flow, Identify answer categories with Numbers, ask only one question at a time Should not Contain; Pre-coding Information

Table 4.3: Selected Elements of the Total Design Method

Based on Dillman (2009)

4.4.2.3. Bilingual Procedure

The original survey instrument was an English version based and adopted from Capron (1999). A modified version was used in order to produce the web-survey questionnaire consisting of 10 pages and 73 items. Both the English version (Figure I.1) and the Greek version (Figure I.2) of the questionnaire are presented in Appendix I. The bilingual author of this article and the bilingual supervisor of the thesis independently translated and produced the questionnaire into Greek and differences were reconciled. Attaining both insider's and outsider's perspectives together can assist in identifying if any problematic issues exist (Schaffer and Riordan, 2003). Therefore in the pre-testing phase the questionnaire was scrutinized by Greek speaking reviewers (see section 4.4.2.4) for ambiguity or difficulty in understanding and in order to enhance the validity of the instrument. Also, monolingual members of the unfamiliar culture (in this instance the English language) have reviewed the questionnaire as the language from the other culture would not influence their speech patterns (Erkut *et al.*, 1999).

4.4.2.4. **Pre-testing Procedures**

Pre-testing according to Dillman *et al.*, (2009) is the point at which questionnaire design and survey implementation begin to intersect. The stage of pre-testing requires consultation with a variety of different people whose areas of expertise are likely to be significantly different. Having a systematic approach to obtain feedback from a variety of knowledgeable people on a complete draft of the questionnaire is vital for evaluating probable survey design problems.

Key informants, CEOs and academics were contacted and interviewed in order to pre-test all of the survey's instruments (pre-notification, sequence, reminder and questionnaire) and to establish both content and face validity.

Key informants, CEOs and academics were contacted and interviewed in order to pre-test all of the survey's instruments (pre-notification, sequence, reminder and questionnaire) and to establish both content and face validity.

All of the informants that were used for the pre-testing purposes held key managerial positions in various companies and were knowledgeable about the subject. The respondents were asked to test the adequacy of the various aspects of the survey package such as e-mail notification, questionnaires' format, size, order and coherence of the questions and general comments of the questionnaire.

Also, further refinements were made to the survey instruments following a review by two CEOs, of major companies that operate in Greece made available through personal contacts. Both of the two contacts were executives experienced in acquisition implementation employed by large corporations in Greece. Their initial thought was that the subject of post-acquisition performance was really intriguing and that it would be interesting to see the outcome of the study. Following their review, the principal recommendations that emerged, involved around the clarity of the questions of the questionnaire along with its length in order to maintain it as brief as possible. Another point they highlighted was the assurance of the participants that responses would be anonymous and confidential and that no sensitive information was going to be made public.

Conclusively, the supervisor overseeing the thesis along with lecturers who had used the same kind of survey instrument before, examined the questionnaire and provided comments on the whole procedure. The researcher then used the comments obtained from the reviewers to make the necessary modifications to the questionnaire (i.e. adding or deleting items, order of the questions, paraphrasing), a detailed account is provided in section 4.4.2.5.

4.4.2.5. Comments

The majority of the reviewers commented on the order of the questions in the questionnaire. In the first draft of the questionnaire the order of the sections were as follows: 1) Post-acquisition divestiture measures, 2) Post-acquisition resource redeployment measures, 3) Value creating mechanisms, 4) Acquisition performance, 5) Organisational Changes and 6) Control questions. The reviewing panel believed that the survey should start with the most important questions, namely the value-creating mechanisms and acquisition performance. Then move to the control questions and organisational changes and finally place the post-acquisition resource redeployment and divestiture measures last. Therefore, the order of the questionnaire changed to reflect their suggestions. The final order of the sections was as follows: 1) Value creating mechanisms, 2) Acquisition performance, 3) Control questions, 4) Organisational Changes, 5) Post-acquisition resource redeployment measures and 6)

The section regarding the post-acquisition divestiture measures (Section 6) and especially the order of the questions and their importance appeared to raise concerns with the reviewers. Thus, after having the items rated their order of how they showed changed. Consequently, the resulting order was: 1) Manufacturing, 2) Distribution, 3) Sales networks, 4) Administration and 5) R&D).

Regarding the first page of the survey they felt that there should be a brief synopsis of the survey, a small guideline of how to answer the questions and provide respondents reassurance about the confidentiality of all the information obtained.

Also concerning the Greek version of the questionnaire, paraphrasing was discussed in order to change items and wordings to their most accurate representation in the Greek language. Questions 2, 7, 11, 12, 15, 18, 19, 20, page 3 and page 8 section titles were changed to reflect the comments made by the reviewing panel. Versions of the questionnaire can be provided by the author upon request.

4.4.3. Web Survey Delivery

At the onset, it seems that many features of a web-survey are quite similar to those used for mail surveys however due to the use of different technologies; the web implementation issue has to be approached in a somewhat different manner (Dillman *et al.*, 2009).

4.4.3.1. Content of the invitation email

The basic aim of the invitation (pre-notification) email is to inform recipients about the purpose and the importance of the study and persuade them to complete the questionnaire. Various rewards have been suggested in the literature, such as money, gift cards, or even electronic gift certificates through services such as PayPal in order to induce responses (Birnholtz, *et al.*, 2004). Incentives have been shown to modestly increase response rates compared to no incentive (GÖritz 2006). Nevertheless, the provision of such incentives requires the surveyor to use a mode of delivery other than the web to contact respondents in order to receive the incentive (Dillman et al 2009). In addition a deadline was set for the questionnaire because the deadline as a device has been shown to yield increased responses in the initial stages of the research (Dillman et al 2009).

Another issue of great importance is the anonymity of respondents and confidential treatment of their details and responses. The initial e-mail invitation as well as the first and last page of the questionnaire clearly stressed the fact that the responses will be treated in a confidential manner and that anonymity would be guaranteed. Furthermore, the respondents were given the option to decide whether or not they wished to receive a complementary report concerning the major findings of the survey. This seems justifiable as a reward and can help to establish a good relationship among researchers and practitioners.

Thus, in the four emails sent (Pre-notification, Follow-up email 1, Follow-up email 2, and Final reminder) the importance of the study for M&As and the competitiveness of Greek corporations was stressed.

4.4.3.2. Personalisation

Personalisation has been argued to increase response rates in both the mail surveys and the web surveys (Cook et al., 2000; Dillman *et al.*, 2009; Heerwegh *et al.*, 2005). The effects of personalisation on mail survey response rates have long been studied by researchers. In a paper by Pearson and Levine (2003) by varying the level of personalisation, it was observed that personalisation, in any shape, did not enhance the response rate as the increase was not statistically significant.

However, in a study by Heerwegh et al. (2005) it was reported that personalisation increased the web survey response rate considerably by 8.6%. One explanation for this positive relationship was provided by Dillman (2009) who argued that personalisation can cause the recipients an enhanced sense of importance and value. Therefore, a positive consideration is shown to the recipient, which in turn has some reward value. Dillman, (2009) reports that personalization in general public mail surveys increases response rates from 5 to 11%. Also a number of authors reported an increased response rate when personalisation was applied (Boser, 1988; Dodd and Markwiese, 1987; Heerwegh *et al.*, 2005).

Also, as an additional persuasive indication, for the respondent, is that he/she receives a more personal attention with individual e-mails, instead of getting bulk e-mails (Dillman, 2009). Sending group invitations has been found to reduce the number of response rates in a web survey compared to the approach of sending individual e-mails (Barron and Yechiam, 2002).

However, despite of the positive effect on response rates, personalising invitations can have an adverse effect on the obtained data. In the case of an increased level of personalisation being used, respondents might feel more confidence in the privacy of the questionnaire and are more likely to have a social desirability response predisposition, particularly they are faced with sensitive questions (Heerwegh, 2005).

This study followed Dillman (2009) and Heerweg (2005) and addressed the e-mail directly to the individual i.e. Dear Mr. Smith, and thus, expected a higher response rate.

Finally, a potential risk with personalisation is the possibility that the recipient may have moved to another company. As a matter of fact, a number of e-mails (12 in total) bounced back shortly after the notification letters were sent out indicating that key informants had either moved or their email address was wrong. Consequently, new contact details of the key informants were obtained and the mailing list was updated accordingly.

4.4.4. Web Survey Completion

4.4.4.1. Follow-up emails and reminders

A major difference between the two designs is that mail surveys require delivery of the questionnaire to respondents, whereas in web-survey's respondents are asked to obtain the questionnaire themselves. Typically this will result in a lower response rate. One way to increase response rates is by sending multiple contacts (emails) to potential web survey respondents (Cook *et al.*, 2000). In a study made by Wygant *et al.*, (2005) four follow up letters were used in a study of college undergraduates, which resulted in a 37% increase in response rate relative to only one survey invitation and no follow-ups. Nonetheless, as insufficient research has been carried out on the optimal combination of contacts to use, a slightly modified sequence from a postal mail survey may be appropriate to employ (Dillman *et. al.* 2009). The chosen combination for the thesis web-survey mail implementation was a prenotification email, followed by three reminder follow-up emails.

Reminders and follow-up emails have been widely believed to considerably improve response rates. Following the total design method introduced by Dillman et al (2009) four e-mails were sent to the respondents. A week after the initial e-mail shot a reminder email was sent to the respondents who had not sent back the questionnaire. According to Dillman et al (2009) a week is considered to an appropriate time interval, and is not seen as too aggressive.. Following the first reminder a second follow-up email was sent, two weeks later and finally the last measurement scales reminder was sent after three weeks stating that a short amount of time is left to complete the survey and the importance of responding.

The process of gathering the questionnaires was performed in two rounds. As it can been seen from Table 4.4 the first round of e-mails produced 53 and 68 usable and non-usable questionnaires respectively. The second wave produced 83 usable and 32 non-usable responses (a more detailed account is given in section 4.5.4). Thus a total of 136 usable questionnaires versus a 100 non-usable questionnaires were gathered.

Email Waves	Usable Questionnaires	Non-Usable	
Initial E-mail 1 st wave	15 (12.4%)	24 (19.83%)	
First Follow-up 1 st wave	11 (9.09%)	18 (14.88%)	
Second Follow-up 1 st wave	12 (9.92%)	17 (14.05%)	
Final Reminder 1 st wave	15 (12.4%)	9 (7.44)	
Total 1st Wave	53	68	
Initial E-mail 2 nd wave	21 (18.26%)	4 (3.48%)	
First Follow-up 2 nd wave	31 (29.96%)	9 (7.83%)	
Second Follow-up 2 nd wave	21 (18.26%)	14 (12.17%)	
Final Reminder 2 nd wave	10 (8.70%)	5 (4.35%)	
Total 2nd Wave	83	32	
Total	136	100	

Table 4.4: Returned Questionnaires First and Second Wave

4.4.5. Web Survey Return

Following the completion of the collection phase the final step is the web survey return. In this final stage the researcher screens the data for missing values and codifies the answers from the questionnaires. This process consists of assigning a code number to each answer category so that these answers are transformed electronically and stored in the computer. Consequently, after the answers had been codified, using an appropriate statistical package (SPPS, SAS, Minitab, Eviews) statistical analysis could be performed. Each variable was then coded and was input onto the SPSS^R for WindowsTM (Release 17.1) statistical package (SPSS Inc., 2007) which was used for further statistical analysis.

4.5. Sampling Issues

This section sets out to discuss issues relating to sample size and selection, key informants, reminders and response rates, pre-testing procedures as well as non-response bias.

4.5.1. Population and Frame

The population consisted of acquisitions from Greek companies operating in the same or different industries. In doing so, a country level research was conducted. The

period of 2005-2009 was chosen, in order to exclude a) recent acquisitions where post acquisition restructuring had not yet led to asset divestiture or resource redeployment and b) older acquisitions for which managerial turnover would make it difficult to gather detailed information about post-acquisition activities (Capron 1999; Capron and Guillén 2009). In this study the population frame was chosen so as to satisfy the following criteria. Firstly, the organisation should operate in Greece. Secondly, the acquisition should have been completed. Thirdly, a member of the top management team should be easily identifiable (i.e. position in the company, email).

After having established the objectives concerning the population of the study, a sampling frame that fulfilled the above requirements was determined. A number of prospective published materials were examined. Sources for information included the:

Athens Stock Exchange, The Athens Stock Exchange or ASE or ATHEX is a stock exchange located in Athens, Greece. Companies listed on the exchange are regulated by the Hellenic Capital Market Commission. Companies that were listed on the Athens stock exchange were obtained.

From the **Greek Ministry of Regional Development and Competitiveness**, individual list and company numbers were acquired for companies that have participated in an acquisition in the desired time frame.

ICAP Group, (<u>www.icap.gr</u>) through its subsidiaries and joint venture it provides a wide range of services that are grouped in the following 4 Service Lines: Credit Risk Services, Marketing Solutions, Management Consulting and People Solutions. For its marketing solutions it offers business directories and marketing lists through its own ICAP Databank that were used to obtain lists of companies.

Thomson Financials, Thomson One and DataStream, provide access to global market data and news, including company accounts, shareholder information, IPO data and information on Mergers and Acquisitions. Data is provided by leading financial sources including Thomson Financial, Compustat and Worldscope. DataStream offers access to a set of historical financial content.

For the period 2005 – 2009 a total number of 510 companies were drawn from these directories.

4.5.2. Procedures and Sample Size

The process of choosing the sample used in this study was rather straightforward. All the Greek companies that were involved in a domestic or cross-border acquisition were chosen. The period of 2005-2009 was chosen, in order to exclude a) recent acquisitions where post acquisition restructuring had not yet led to asset divestiture or resource redeployment and b) older acquisitions for which managerial turnover would make it difficult to gather detailed information about post-acquisition activities.

In this study the population frame was chosen so as to satisfy the following criteria. First, the organisation should operate in Greece. Second, the acquisition should have been completed. Third, a member of the top management team should be easily identifiable (i.e. position in the company, email). Fourth, acquisitions that participated in the acquiring company for less than 100% were excluded. Reasons for not including less than half of the companies in the sample, involved unknown Chief executive or being unable to easily identify contact information about the top management team of those companies. The resulting number of companies that were selected for this study was 310. A more detailed account is given in section 4.5.4.

4.5.3. Key Informants

A multiple respondent approach provides certain advantages (Venkatraman and Grant, 1986; Glick *et al*, 1990) but it was decided for the purpose of this thesis, the use of one key informant approach. Key informant surveys are a vital data source in marketing and management research (Homburg et al. 2012). According to Glick *et al.*, (1990) the key informant should supply descriptive information about the organisation rather than play the role of the respondent that reacts to questions regarding his or hers perceptions.

the advantages of this approach are:

• There is a high probability that the informant that is the most knowledgeable in each organisation will respond to the survey (Kiessling *et al.*, 2008)

• Low variation in informational and motivational biases across organisations (Seidler, 1974)

- Accurate and an effective technique for management research (Golden, 1992)
- an increased number of organisations can be included in the sample given a fixed budget

In order to decrease the chance of any potential measurement error, the key informant approach requires careful consideration of certain issues (Huber and Power, 1985). Following their suggested guidelines, the following issues were tackled: identification of the most informative person, recognition of the role of the person's emotional involvement with the subject, attempt to motivate informants to co-operate with the study seriously, minimise elapsed time, assessing the impact of alternate framing of questions and, finally, use of pre-tested and structured questions (Kiessling *et al.*, 2008). The highest level of a top full time manager in each company was carefully chosen as a single key informant in order to describe the changes that took place after the acquisition in his or her company. Also, as reliability is linked to the informant's hierarchical position and tenure, informants in high hierarchical positions with a longer tenure are more reliable (Homburg *et al.*, 2012). Consequently, the Managing Director or the Chief Executive officer of the firms in our sample was targeted as the most knowledgeable informants.

4.5.4. Non – Respondents

Examining in depth individuals that have not completed surveys can be a difficult and inconsistent task (Rogelberg *et al.* 2003). Some of the companies (12) that were used for the study replied with an e-mail explaining the reason they were not taking part in the survey. Table 4.5 presents the main reasons of non-response. Partial answers (45) and no reason provided (43) explained mainly the non-response.

Overall number of sampling units	310
Overall number of responses	236
Overall number of eligible responses	136
Overall number of ineligible responses	100
Partially answered	45
No reason provided	43
Policy of non -participation in surveys	12
Table 4.5. Descent for non regroups	



A summary of the methods for estimating non-response bias are presented below (Table 4.6). Nine methods were found to be in use (Armstrong and Overton, 1977; Rogelberg et al 2003, Rogelberg and Stanton, 2007):

	Approach	Details
1.	Archival Analysis	Compare respondents to non-respondents on variables contained in an archival database
2.	Follow-up approach	Resurvey non-respondents
3.	Wave analysis (Extrapolation)	Compare late respondents to early respondents
4.	Passive nonresponse analysis	Examine the relationship between passive nonresponse characteristics and standing on the key survey topics being assessed
5.	Interest-level analysis	Assess the relationship between interest in the survey topic in question and standing on the key survey topics being assessed
6.	Active nonresponse analysis	Assess percentage of purposeful, intentional, and a priori nonresponse using interviews
7.	Worst-case resistance	Use stimulated data to determine robustness of observed findings and relationships
8.	Benchmarking analysis	Use measures with known measurement properties normative data so that observed data can be cross- referenced
9.	Demonstrate generalizability	Replicate findings use a different set of research methods

Table 4.6: Non-response Bias Impact Assessment Strategy

Adopted from Rogelberg and Stanton, 2007

In this thesis the wave approach (Linear Extrapolation Method, Armstong and Overton, 1977) was chosen in order to evaluate non-response bias because as it offers certain advantages. a) It is a commonly used method b) it is inexpensive c) it is not time consuming and d) the data requirements are low. The extrapolation method is based on the assumption that the "less readily" (Pace, 1939) respondents are comparable to non-respondents.

Armstong and Overton (1977) within the extrapolation method proposes three different types of extrapolations, namely the successive waves, time trends and concurrent waves. The selected technique in this thesis was extrapolation method over successive waves of the questionnaire, where wave refers to the responses produced through a stimulus. A stimulus in this instance was the reminders and the follow-up emails.

Therefore, each questionnaire was categorised by the date it was received for both rounds and subsequently was split in four quartiles. The first one comprised early respondents and the last one late respondents. A Mann–Whitney test was run between these two groups of 136 cases to test the null hypothesis of similarity in all variables across the early and late respondents. No significant differences were found among the variables used. Thus, non-response bias was not an important issue and the data were unlikely to be biased by non-response errors.

4.6. Data Analysis and Methodologies

The next step in data analysis - following the completion of the collection phase - is to codify the questionnaires. A total of 136 questionnaires via a websurvey were received which constitutes a response rate of 44%. Subsequently, after having codified our answers while inputting the raw data into SPSS eye screening was employed to identify completeness and quality of the questionnaires. The process of eye screening revealed that all of the 136 questionnaires were usable. Consequently each variable was then coded and was inputted onto the SPSS^R for WindowsTM (Release 18) statistical package (SPSS Inc., 2007) for further statistical analysis.

4.6.1. Classification and Choice of Statistical Techniques

The literature on research methodology proposes that three categories of data analysis exist and can be classified in accordance to the amount of variables and type of data they entail (Howell, 1987; Bryman and Cramer, 1994; Hair *et al* 2010). The methods of data analysis are commonly known as univariate, bivariate and multivariate.

The first method of data analysis, **univariate**, is mainly used in cases where from a sample of measures a single measure exists and also, when the object is going to be analysed alone even if there are several measures of the sample of objects. Popular univariate techniques include the measures of central tendency, such as mean, median, mode and dispersion, such as standard deviation and relative/absolute frequencies. Those techniques can be used in accordance with statistical tests such as the *t*-test and the *z*-test.

The second method of data analysis is the **bivariate** one. The difference from the univariate measures lies in that they allow researchers to investigate interaction between two measures from a given sample simultaneously. Tests that lie within bivariate group of analysis are the *U*-test and the correlation analysis.

Moving on to the third method of data analysis are the **multivariate** techniques. In this case simultaneous analysis is needed if more than two measures of each object in a sample are present. Here, two methods of multivariate data analysis can take place. The primary method in order to analyse multivariate data is the dependent type. This method is employed when one or more variables are identified as being associated with a set of independent variables. In order to analyse such cases, several statistical techniques exist such as multiple linear regression analysis, multivariate analysis of variance and covariance, multiple discriminant analysis, automatic interaction detection and conjoint analysis (Hair *et al.*, 2010; Crayen *et al.*, 2011). The second method to analyse multivariate data is the interdependent type. This method is used when a variable is not selected as a dependent variable. Consequently, that signifies that independent variables are not defined but more accurately this procedure permits the analysis of all variables equally. The statistical techniques used to analyse

interdependent multivariate data involve principal component analysis, cluster analysis, multidimensional scaling and correspondence analysis (Hair *et al.*, 2010).

Many researchers have emphasised on the significance of three criteria in the selection process of the appropriate statistical technique(s). The first criterion states that the level of measurement ought to be taken under consideration. Several techniques require that the nature of the data have to be of a specific type before it can be used in performing statistical tests. The second criterion dictates that knowledge of the research design is important because it can determine that dependency of the measures, measures per object and number of groups being analysed. Finally, the assumptions that underlie various techniques can be inappropriate for research (Pacheco *et al* 2013).

Table 4.7, presents all the measurement scales that have been used for one or more constructs/variables. All the same, the study utilised extensively ordinal scales (semantic differential and Likert type) in its strictest sense. Going into more detail, it should be mentioned that the constructs, dimensions, indicators and finally the study's variables were nonnumeric by nature. Even though integer scoring was used to capture the respondent's opinion, such as the 1 to 5 point Likert scale, the intervals between the adjacent points (1 to 2 or 4 to 5) of the scale cannot automatically be taken as equal. In that case the criterion of interval scale is not fulfilled and therefore the scale is ordinal. In spite of the above line of reasoning researchers within the social science field treat Likert type scales as good approximation of interval measures (Churchill, 2005; Flora and Curran, 2004; González-Rodríguez et al. 2012).

Constructs	Dimensions Indicators		Measurement Scale			
Acquisition Performance	Market Share Sales Intrinsic Profitability (EBITDA/Capital Employed) Relative Profitability (to industry average)	Reflective	Five point- Intervals	Equally	appearing	
Cost-Based Synergies	Cost Reduction	Product Costs Input Prices	Five point- Intervals	Equally	appearing	
Revenue-Based Synergies	Market Coverage	Extension of Product Lines Broadening of Geographical Coverage	Five point- Intervals	Equally	appearing	
	Innovation Capability	Product Innovation Capabilities Development of design cycle				
Asset Divestiture	R&D Manufacturing Logistics Sales Network Administrative Services		Five point- Intervals	Equally	appearing	
Resource Redeployment	R&D Capabilities Manufacturing Know-How Marketing Resources Supplier Relationships Distribution Expertise		Five point- Intervals	Equally	appearing	

Constructs	Dimensions	Indicators	Measurement Scale		
Organizational Changes	Post-acquisition organizational network changes Post-acquisition organizational knowledge changes Retention of the acquired firm's management team Formal organizational changes affected from the retention of the acquired firm Senior Executives made redundant		Five point- Equally appearing Intervals		
			Open Ended		
Control Variables	Relatedness	Similarity of products and technologies Similarity of customers, geographic markets and the degree of direct competition between the target and the acquirer	Five point- Equally appearing Intervals		
	Geographic Scope	Domestic versus cross-border	Binary Variable		
	Relative Size		Five point- Equally appearing Intervals		
	Diversified Acquirer		Three point scale		
	Payment Method		Open Ended		
	Acquisition Classification	Friendly versus hostile	Binary Variable		
	Acquisition Rationale		Itemised Rating Scale		

Table 4.7: Measurement Scales

Considering the above and, more specifically, the available statistical techniques, the most appropriate techniques were selected to be used for the data analysis as Table 4.8 Illustrates.

Constructs analysed using descriptive statistical tests (Mean & Standard deviation (Chapter Five)

Factor Analysis performed to detect for any potential underlying relationships within the model's constructs (**Chapter Six**)

Principal Components Analysis on selected variables within each construct (**Chapter** Six)

Scale indices constructed from the extracted factors (Chapter Six)

Structural Equation Modelling (Chapter Seven)

Table 4.8: Statistical Techniques deployed for Data Analysis

4.6.2. Descriptive Statistics

It has already been mentioned that descriptive statistics are used to describe and summarise raw data. On account of the descriptive findings that are given in the thesis, analyses of these data is provided with the use of percentage frequency scores, along with measures of central tendency and dispersion in order to primarily explore the survey findings. Therefore, in Chapter 5 an initial exploration of the data set is given, for the variables which were measured by a five-point scale. It has been argued that this scale is widely seen as a satisfactorily interval approximation (Churchill, 2005; Nunnally and Bernstein, 1994). For the variables measured by open-ended questions the number of observations, relative frequencies and the mode are presented.

4.6.3. Correlation Analysis

Correlation analysis is needed, because according to Boyd *et al*, (1989) it assists in measuring the strength of a relationship between two variables. Also, scatter diagrams have the ability to present the form of the relationship but can be unclear to the interpretation and present to the researcher a subjective bias. Therefore, the most effective method of evaluating the strength of a relationship between two variables is quantitative analysis producing a correlation coefficient (ρ). According to Baggaley (1981) if the bivariate relationship is a perfect positive correlation the *r* would be equal to +1.00, if it is a perfect negative correlation then ρ would be equal to -1.00 and if ρ is found 0 in linear form then no correlation exists.

In that sense, Pearson product-moment correlation coefficients will be calculated for the variable relationships such as between asset divestiture and resource redeployment and organizational changes on the post-acquisition performance. The purpose of conducting a correlation analysis will be to examine the strength of relationships within each construct to determine whether to proceed toward subsequent analyses by using a data reduction technique. The formulation of the correlation matrices will be conducted in line with the previous rationale in accordance with the advocacy of good practice (Hair *et al*, 2010). The purpose of conducting correlation analysis (see Chapter Six) was to determine whether the strength of relationships within each of the model's constructs was appropriate in order of a data reduction technique to be employed in the next step (Boyd *et al*, 1989). Thus, both Rho (Spearman's) coefficient of rank-order correlation for the variables measured by non-metric scales and Pearson product-moment correlation coefficients for the variables measured by metric scales were calculated.

4.6.4. Factor Analysis

Taking the previous under consideration, it is likely that an incremental decision sequence will be undertaken with the application of factor analysis. Factor analysis is a generic label that has been created in order to describe a family of multivariate statistical methods that can be used for data reduction and summarization (Stewart, 1981; DeVellis, 1991). The objective of factor analysis is to condense the data gathered on a

number of original variables, into a smaller set of composite groups established by a correlation structure. Therefore, factor analysis seeks and identifies the dimensions that underlie the original variables and the data reduction ability being one of the main reasons why factor analysis is so popular among researchers (Gorsuch, 1997; Kerlinger, 1986). Furthermore, various variants of the factor analysis technique exist such as unweighted least squares, maximum likelihood, generalized least squares and one of the most frequently used the principal components analysis type of factor modeling (Bryman and Cramer, 1994).

In short, the decision of which type of factor analysis to be employed rests on the objectives of the factor analysis and a priori knowledge about the variance in the variables (Hair *et al*, 2010). Principal component analysis has the strong advantages of being free of distributional assumptions and of being less prone to improper solutions than maximum likelihood (Fabrigar et al., 1999). Despite the varied opinions among researchers regarding which type is more appropriate, this analysis employed principal component analysis. Thus, the objective to achieve the minimum amount of factors which "were accounted for the maximum portion of the variance represented in the original set of variables (Hair *et al*, 2010, pp.109)" was achieved.

The next decision pertaining to factor analysis is the number of factors to be extracted. Since there is not an exact quantitative approach for deciding the number of factors to be retained in the factor solution, researchers are usually adopting the latent root criterion, the scree test and the percentage of variance explained (Hair *et al*, 2010; Churchill, 2005). The rationale of the latent root criterion or eigenvalue or as alternatively known Kaiser's (1958) criterion is that any "individual factor should account for the variance of at least a single variable" and as such only the "factors having eignvalues greater than 1 are considered significant (Hair *et al*, 2010)". The rational of a scree test is to identify the optimum numbers of factors that can be extracted before the amount of unique variance begins to dominate the common variance structure (Cattell, 1966). By plotting the latent roots against the number of factors in their order of extraction, and by identifying the point in which the resulting curve begins to straighten out, we have an

initial solution of the maximum number of factors to be extracted. In the present study both the latent root criterion and the scree test were used.

It was decided that variables with factor loading over 0.40 and occasionally 0.50 were considered significant. Taking into account the effects of size on the significance of the factor loading (Hair *et al*, 2010), that is, the larger the sample size the lower the factor loading can be, (Bryman and Cramer, 1994; Kim and Mueller, 1978).

Finally, a decision on the kind of rotation procedure is a necessary step and should be considered. Two of the most well-known rotational techniques are: the orthogonal and the oblique. In orthogonal rotation, the factors are constrained to be uncorrelated and in oblique rotation, the factors are allowed to intercorrelate (Brown, 2006). The former computes the extracted factors so that their axes are maintained at 90°. Also, each factor is independent and the correlation between them is determined to be 0. The latter permits factor axis orientations of less than 90°. Due to the development of appropriate computer packages the orthogonal techniques more widely used. Also, because of the perception that orthogonally rotated solutions are more easily interpreted as the factor loadings represent correlations between the indicators and the latent factors (Brown 2006). Additionally it is preferable when the research aim is to utilise the factor results in a subsequent analysis (Dillon and Goldstein, 1984; Bryman and Cramer, 1994).

Having determined that the orthogonal rotation technique was appropriate for our research, it was decided that amongst the existing approaches (Quartimax, Varimax, and Equimax), which are available within the orthogonal technique, the Varimax approach is most preferable since it produces a clearer separation of the factors (Kaiser, 1970; Kaiser, 1974).

As a final remark on the above discussion, it should be said that whereas factors loading were split across one or more factors, the variable was considered as part of the factor in which it carried the highest loading. In the case, that factor loadings were nearly equal across one or more factors the variable was included as part of the factor to which was conceptually relevant. Factor analysis is presented in detail in Chapter 6.

4.6.4.1. Construction of Scale indices

It has been mentioned earlier that one of the objectives of the factor analysis is to reduce the number of variables measuring the same concept into a single variable, which in turn will form the basis for a subsequent statistical analysis. Therefore, additive scales, also known as cumulative, or summated, were constructed by calculating the composite factor mean of the variables with a loading greater than 0.40 (Crawford and Lomas, 1980; Gerbing and Anderson, 1988; Baggozi, 1980).

4.6.4.2. Assessing the Summated Scales

As it has been already discussed in section 4.2, a content (conceptual or face) validity, internal consistency (unidimensionality and reliability), discriminant validity, convergent validity and nomological validity should be used for testing the newly constructed summated scales.

Face validity was taken into account when the questionnaire was developed and the variables for inclusion had to correspond with the construct examined. The rationale for internal consistency is that the individual items of the scale should all be measuring the same construct and thus be highly inter-correlated (Hair *et al*, 2010; Churchill, 2005). Both the dimensionality and the reliability of the scale's items used to assess internal consistency. The test of dimensionality is used to ascertain that the summated scales consist of items loading highly on a single factor (Anderson and Gerbing 1988; Hattie, 1985). Reliability refers to the degree of consistency between multiple measurements of the variable (Ho, 2006). Both the item-to-total correlation, that is the correlation of the item to the summated scale score, and the Cronbach alpha coefficient (Cronbach, 1951), which assess the consistency of the entire scale, were used. Nunnaly's (1967) threshold level of acceptable reliability being an alpha coefficient of 0.50 or greater was adopted. Finally, correlation analysis was used for assessing the discriminant validity, which means that the summated scale sufficiently differs from other similar concepts (scales) and nomological validity was taken into account through a rigorous literature review.

4.6.5. Hypothesis Testing by Product –moment Correlation Analysis

The next step in the statistical analysis was to test the hypotheses developed in Chapter 3. Descriptive statistics, as it has been already disputed are used to provide a general illustration of the data, whereas inferential statistics are primarily used to infer the truth or falsity of a hypothesis.

Even though, the hypotheses may not be able to be proved conclusively (see section 4.2), it can be said that they might be able to prove or disproved them within a specified margin of error. It is widely accepted that, "it is much easier to estimate our error of incorrectly rejecting a true hypothesis than to estimate our error of incorrectly accepting a false one (Bailey, 1994)". Therefore researchers are developing two mutually exclusive hypotheses. The first one is called the null hypothesis and specifies statistical independence (ρ =0), which means that there is no relationship between the variables. The second hypothesis is the proposed one, and as such it assumes that there is a relationship between the variables (ρ =0). The former is symbolised by H_o and the latter by Ha:

Ho: ρ=0

Ha: p≠0

Although Ha is the hypothesis that needs to be confirmed, instead of attempting to do so directly, an attempt is made to reject the null hypothesis (Ho) by setting an acceptable level of error (either 0.05 or 0.01). As such, by succeeding in rejecting the null hypothesis the assumption exists that the alternative hypothesis, that is, the Ha is true.

Also, depending on the scales used (nominal, ordinal, interval and ratio), various measures of association have been developed such as phi coefficient (for two nominal variables), gamma (for ordinal scales) rho for (ranked ordinal variables) and Pearson's product moment correlation coefficient (for interval scales). Because of the interval nature of the scales used, the Pearson product-moment correlation coefficients were calculated to determine the nature, strength and significance of the hypothesised associations between the variables. Nonetheless, a mere calculation of the value of r is

not sufficient. A test of the statistical significance of r must be performed. As such, the tstatistic was calculated, which tests the null hypothesis, that is, the two variables under investigation are linearly independent. Finally it should be mentioned that the following assumptions should be valid in calculating the r:

- Both variables are intervally measured
- The two variables are distributed in a bivariate normal distribution
- The relationship is linear
- The sample is of adequate size (over 30) to assume normality

4.6.6. Choice of Multivariate Technique

A researcher uses multivariate techniques in order to expand his explanatory ability and statistical efficiency (Hair et al 2010). Multivariate techniques include multiple regression analysis, factor analysis (discussed in detail in Section 4.6.4), multivariate analysis of variance are some of the techniques that provide the researcher with tools to tackle with managerial and theoretical questions. All of these though share one common limitation; they can only examine a single relationship at a time (Hair et al 2010).

4.6.7. Structural Equation Modelling

Structural equation modelling (SEM from henceforward) is a family of statistical models that tries to find relationships among multiple variables (Hair *et al.*, 2010). SEM is a multivariate technique that is described as a combination of both factor analysis and path analysis (Ho, 2006). In doing so it examines the structure of interrelationships expressed in a series of equations, similar to a series of multiple regression equations. These equations depict all of the relationships among constructs (the dependent and independent variables) involved in the analysis. Constructs are unobservable or latent factors represented by multiple variables (much like variables representing a factor in factor analysis). SEM can be thought of as a unique combination of both types of multivariate techniques (interdependence and dependence), because its foundation lies in two familiar multivariate techniques: factor analysis and multiple regression analysis.

SEM models are able to be tested in different ways, all structural equation models are distinguished by three characteristics (Hair et al 2010):

- 1. Estimation of multiple and interrelated dependence relationships
- 2. An ability to represent unobserved concepts in these relationships and account for measurement error in the estimation process
- 3. Defining a model to explain the entire relationships.

SEM requires a large sample relative to other multivariate approaches. There exist different opinions relating to the minimum sample size (MacCallum *et al.*, 2001). The sample size for SEM includes five considerations: 1) multivariate normality of the data. As data diverge more from the assumption of multivariate normality, then the ratio of respondents to parameters needs to increase. 2) Estimation technique. The most common SEM estimation procedure is maximum likelihood estimation (MLE). MLE can provide valid results with sample sizes as small as 50. Minimum sample sizes to ensure stable MLE solution increase when confronted with sampling error (MacCallum 2003). 3) Model complexity. The more complex a model can be, there is a need for larger samples. 4) Amount of missing data can complicate the testing of SEM models and the therefore the researcher should plan for an increase in sample size to offset any problems that might occur from the missing data (Hair *et al.*, 2010). And 5) average error variance among the reflective indicators. Models containing multiple constructs with communalities less than 0.5 also require larger sizes for convergence and model stability (Enders and Bandalos, 2001).

SEM in its most general form consists of two parts: the measurement model and the structural equation model. The measurement model specifies involves the rules of how the latent variables are measured in terms of the observed variables and it describes the measurement properties of the observed variables. The structural equation model is a flexible, comprehensive model that specifies the pattern relationships among independent and dependent variables, either observed or latent. It incorporates the strengths of multiple regression analysis, factor analysis and multivariate ANOVA (MANOVA) in a single model that can be evaluated statistically. Several statistical

programs exist and are convenient for performing SEM (LISREL, EQS, Mplus, AMMOS and CALIS). The statistical package chosen is AMOS as it comes as a package with SPSS and because of the graphical interface that provides which make it easier for the analysis. The SEM model and its consequent analysis are presented in detail in Chapter 7.

4.7. Conclusion

This Chapter has presented various issues relating to the empirical approach of this study. As such an account was given on a number of epistemological themes underling the empirical study, the adopted research design approach, sampling procedures, as well as issues relating to survey implementation.

An account of what constitutes theory and the theoretical foundations of business research was presented. Definitions for ontology and epistemology were provided along with descriptions of the most important philosophies of science in management studies which are the critical realism, positivism, constructivism, interpretivism and pragmatism. This thesis empirical and ontological framework, this thesis is based on principles of positivism and the primary ontological assumption of the study is critical realism.

In addition the main components of contruct validity were presented along with their relative techniques for analysis. Validity in this study, was achieved by communicating, during the pre-testing phase, all the relevant proposed items to managers and experts in their field. Validity check has been taken into account by carrying out exploratory factor analysis. As far as reliability assessment, convergent, discriminant and nomological validity and are concerned the results are presented in Chapter 6.

The most appropriate research design for the purposes of this study is considered to be the combination of descriptive and causal research approach. Because of time and budget restrictions in addition to career pressures have forced the majority of the researchers to adopt a cross-sectional approach. In this thesis, a descriptive approach was used, on primary data with a five point scale (both Likert and Semantic) and the use of the subjective (questionnaire) approach was employed.

Furthermore, the web survey process was described, along with the development of the questionnaire, the bilingual and pre-testing procedures. Also, the population, sample size key informants and non-respondents were discussed. Finally a classification and choice of statistical technique was made. The chosen techniques were, descriptive statistics, factor analysis, principal components analysis, scale indices and structural equation modelling (SEM).

In the following chapter, the descriptive findings will be presented and discussed.

5. Descriptive Research Findings

5.1. Introduction

Chapter 4 discussed issues related to the methodology and the essential elements of an empirical research project. This chapter delves into the analysis of the data collected, with the use of descriptive statistics. Items that will be presented and analysed include, but are not limited to, the sample description, response frequencies, mean values and standard deviations of all response values. The frequency tables for all the research questions are presented in Appendix III.

5.2. Sample Description

5.2.1. Industry

The sample in this study comprises Greek acquirers that were involved in M&A activity during the period 2005 to 2009. Table 5.1 presents the distribution of the sample of M&A deals on the basis of the industry the companies in the sample data operate in. There are a number of different classification systems available that facilitate the identification of the industry in which companies operate. The most widely known are the Standard Industrial Classification (SIC), the North American Industry Classification System (NAICS)¹ and the Global Industry Classification Standard (GICS) and the Statistical Classification of Economic Activities in the European Community (NACE). NACE is similar in function to the SIC and NAICS systems. Therefore, using the NACE, there were a total of 15 major industries identified in the sample out of the 136 companies that responded to the questionnaire.

¹ NAICS has to a large extent replaced the SIC system. Note however that the SIC codes are still being used by certain government departments and agencies, such as the U.S. Securities and Exchange Commission (SEC).

Code	Industry	Frequency	(%)	Cumulative (%)
D	Manufacturing	36	26.47%	26.47%
J	Financial Intermediation	32	23.53%	50.00%
K 70	Real Estate and Rental and Leasing	10	7.35%	57.35%
G 52	Retail Trade	8	5.88%	63.24%
А	Agriculture, Hunting and Forestry	7	5.15%	68.38%
G 51	Wholesale Trade	7	5.15%	73.53%
K74.15	Management activities of holding companies	7	5.15%	78.68%
L 75.12	Health Care and Social Assistance	6	4.41%	83.09%
H 55	Hotels and Restaurants	6	4.41%	87.50%
J63.1	Information	5	3.68%	91.18%
М	Professional, Scientific and Technical Services	4	2.95%	94.12%
C 23	Construction	3	2.21%	96.32%
I 63	Transportation and Warehousing	3	2.21%	98.53%
CB 14	Mining	1	0.74%	99.26%
F42.2	Utilities	1	0.74%	100.00%
	Total	136	100%	

Table 5.1: Classifications of Sample Industries

The statistics reported in Table 5.1 indicate that the majority of companies that participated in the study (50%) fall under the Manufacturing (26.47%) and Finance and Insurance (23.53%) industries, respectively. Other industries that are represented in the sample include Real Estate and Rental and Leasing (7.35%), Retail Trade (5.88%), Agriculture, Forestry, Fishing and Hunting (5.15%), Wholesale Trade (5.15%) and Management of Companies and Enterprises (5.15%). The above industries represent 78.68% of the sample in this study.

5.2.2. Relative Size

Figure 5.1 presents the distribution of the relative size of the target to the acquirer – on the basis of their annual sales (this is formulated as the ratio of Target Sales to Acquirer Sales). For the majority of the deals (60.3%), the relative size ratio was below 25%, while only 2.9% of the sampled deals exhibited a ratio above 100%. This indicates that the sampled deals mainly represent cases where large firms acquire smaller ones.

This is in line with an early study of M&As in Greece, (Katsos and Lekakis, 1991) which found that small to medium firms merge only with similar sized firms and that firms tried to combine capital assets and marketing networks. According to Gorton *et al.*, (2009) there are difficulties in acquiring larger companies (i.e. raising larger funds to finance the acquisition) and that might explain the why in most acquisitions the acquirer tends to be substantially larger than the target.



Figure 5.1: Relative size of the target to the acquirer

5.2.3. Relatedness

Table 5.2 presents data on the degree of relatedness between the targets' and the acquirers' business. The statistics indicate that for the majority of companies there was a relatively high degree of business relatedness, since the percentage of managers who responded "a lot" or "absolutely" in the questionnaire was above 50%. For example, in questions concerning the *similarity of the products/services*, 46.3% and 25.7% of the surveyed managers responded that their products display "a lot of" or "absolute"

similarity with the products of the merging firm, respectively. As far as *similarities in technology* are concerned, 39.7% of the managers identified their technologies as being "a lot similar" to those of the target firm. In addition, according to 50.7% and 15.4% of the respondents, the *type of customers they sold their products* to, were "a lot similar" and "absolutely" similar, respectively.

Furthermore, in most cases, the companies were not direct competitors, with 68.4% of the respondents indicating a range of responses between "not at all" to "neutral". Finally, their products/services were in most cases classified as being complementary (34.6%).

Nature of Relatedness	Not at	Some	Neutral	Α	Absolutely	Mean	SD
	all			lot			
Your products/services were	13	17	8	63	35	3.66	1.25
similar	9.6%	12.5%	5.9%	46.3%	25.7%		
Your technology was similar	10	29	21	54	22	3.36	1.19
	7.4%	21.3%	15.4%	39.7%	16.2%		
Your geographical markets	18	19	20	57	22	3.34	1.27
were similar	13.2%	14%	14.7%	41.9%	16.2%		
The types of customers to	17	14	15	69	21	3.46	1.22
which you sold were similar	12.5%	10.3%	11%	50.7%	15.4%		
You were direct competitors	37	19	37	27	16	2.75	1.36
_	27.2%	14%	27.2%	19.9%	11.8%		
Your products/services were	23	18	31	47	17	3.13	1.28
complementary	16.9%	13.2%	22.8%	34.6%	12.5%		

Table 5.2: Nature of Relatedness N=136

According to Seth (1990b), the possible synergistic gains are greater in large related acquisitions than in large unrelated ones. Different degrees of relatedness can have different effects on value creation and therefore on acquisition performance (Lee and Liebermand, 2010). In addition congruent lines of business that exist within a firm have the ability to generate competitive advantage by allowing resource sharing (D' Aveni *et al.*, 2004). As such, opportunities for cost savings can be achieved through divestiture of redundant assets, as the degree of relatedness increases and from redeploying resources into new areas that can be more productive and potentially combining them with new resources (Capron, *et al.*, 1998; Penrose, 1959; Teece, 1980, 1982).
Since the sample contains companies that engage mostly in related acquisitions, according to the managers responses, there is a possibility of a positive effect on post-acquisition performance.

5.2.4. Geographical Scope

Next, the geographical scope of the deals is considered. Figure 5.2 depicts the geographic distribution of the sampled acquisitions and separates them into domestic vs. cross-border ones. Domestic acquisitions constitute the overwhelming majority (80%) of the sampled cases, whereas cross-border acquisitions only account for 20% of the sample. It has long been disputed that cross-border acquisitions help acquirers improve their capabilities by obtaining access to diverse resources and environments (Hitt *et al.*,1997, 1998; Nadolska and Barkema, 2007).

Another strand of literature contends that cross-border acquisitions are mainly driven by the acquirer's desire to redeploy its excess resources and to use the target's location specific resources in order to cater for the redeployment of other resources (Buckley and Casson, 1976; Caves, 1982; Hennart, 1982; Morck and Yeung, 1992; Anand *et al.*, 2005). The resource based view argues that firms often seek complex and difficult to imitate resources and capabilities through acquisitions rather than contractually through discrete factor markets (Wernerfelt, 1984; Dierickx and Cool, 1989; Capron and Chatain, 2008; Kunc and Morecroft, 2010).



Figure 5.2: Acquisitions Geographic Scope

Furthermore, given the large number of financial institutions in the sample, there was an expectation of a smaller number of cross-border acquisitions, as in many studies, international acquisitions tend to be less efficient than domestic ones (Buch and Delong 2004). In addition, Berger *et al.* (2001) suggest that efficiency barriers (geographical, different languages, different cultures) impede cross-border activity and therefore offset some of the gains of cross-border consolidation. Also, according to Fang et al (2007), marketing knowledge resources can have a direct application in the same geographic setting, while technological knowledge resources might yet require time to be adapted for advantage in the new business line. Finally, Danbolt (2004) suggests that target shareholders may gain more in domestic than in cross-border acquisitions if acquiring companies share cost savings with target shareholders.

5.2.5. Target's Home Country

Figure 5.3 presents the distribution of the target's home country. It is clear that the majority of the targets are domestic 110 (81%), while 22 cases (16%) represent acquisitions of targets from Eastern Europe (Romania, Bulgaria, Serbia, Cyprus, Ukraine and Poland) and the remaining 4 (3%) come from Asia and Africa (Turkey and Egypt). Home country and industry interactions can have a significant effect because of country specific resources, culture, and institutions that stimulate the development of specific industries over others (Tallman & Li, 1996; Wright, Filatotchev, Hoskisson, & Peng, 2005; McGahan, A. M., & Victer, R. 2009).



Figure 5.3: Target's Home Country

5.2.6. Type of Diversification

Figure 5.4 illustrates the type of diversification the acquirer aimed to achieve through the M&A deal. The type of acquisition, and, more specifically, focus vs. diversification, has received great attention in strategy research, yet there is little agreement on the relationship between diversification and performance (Palich et al., 2000; Teece, 1982). According to Ng (2007), the reasons behind the diversification of an organisation into unrelated businesses are not well understood in strategy research. It is evident in Figure that most of the companies in the sample (42.6%) diversified into related business, 23.5% focused on one main business, and 33.8% were conglomerates that diversified into unrelated business. Wan *et. al.* (2011) show that, diversification contributes to superior performance and therefore firm value increased to the point where resources become too complex to manage or business units become unrelated.



Figure 5.4: Acquirer Diversification Type

5.2.7. Type of Payment

Next the thesis turns to the examination of the type of payment that was used for the acquisition. The method of payment entails information about the acquirer's assessment of either its own value or the value of the target (Loughran and Anand, 1997; and Rau and Vermaelen 1998) and it can imply that managers who believe their stock is overvalued (undervalued) pay with stock (cash).

Figure 5.5 shows the distribution of methods of payment used by the acquiring firms to acquire the target companies. It is clear that *cash* was used as the preferred means of payment in majority of cases (79%), followed by securities (10.1%), securities exchange (6.5%), and a combination of cash and securities (4.3%). This evidence is in line with the results obtained by Faccio and Masulis (2005), who studied M&A deals that took place in 13 European countries, over the period January:1997- December: 2000; the authors found that out of 3,667 cases studied, 80.23%, were settled with cash. Other similar studies they exhibit a number of interesting results, for example, Conn *et al.* 2005 found that bids funded with any method of payment except cash lose -0.47% over a period of 36 months after the announcement. Further on, evidence reported from a

sample of 179 successful British bids from Antoniou and Zao (2004), showed that equity bids have a tendency to under achieve considerably in the first and second years after the bid took place.



Figure 5.5: Type of payment

Many studies using empirical evidence point to lower or negative bidder abnormal returns for stock-financed acquisitions, while higher or positive for cash-financed acquisitions (Alan, 1997; Rau and Vermaelen, 1998). On the other hand, Alan (1997) reports negative and significant abnormal returns related with cash offers, Fields, Fraser and Kolari (2007a) find insignificant results, and Chang (1998) finds insignificant bidder excess return for cash offers and positive and significant bidder excess return for stock offers. Consistent evidence appears in their work, that cash bids are associated with better performance in both the short run and the long run (Cosh and Guest 2001; Linn and Switzer 2001; Loughran and Vijh 1997). Bids funded with any method of payment except cash, lose -0.47% over a period of 36 months after the announcement (Conn *et al*, 2005). In general, the existing evidence suggests that cash bids outperform equity bids. Thus, payment method is expected to have an effect on post-acquisition performance given the large number of cash financed acquisition in the sample.

5.2.8. Acquisition Classification

Figure 5.6 presents the classification of acquisitions into hostile and friendly ones. The large majority of cases (95.7%) reviewed in this study, are classified as friendly acquisitions. Weir and Laing (2003) used a sample consisting of 104 friendly M&As in 1998 and an equal number of hostile deals and concluded that friendly acquired companies turned out to be more efficient, to use their assets more effectively, and to have a lower market-to-book value ratio, compared with target companies in hostile bids.



Figure 5.6: Acquisition Classification

Even though the hostile takeovers comprise only a small number of the sample (N=6) a comparison of the means was conducted and the results are summarised in Table 5.3 Comparing the means from the two sub-samples (Friendly versus Hostile) it is evident that there are no significant differences between the two. The hostile cases have a greater mean in both the resource redeployment to the target and from the acquirer. In addition greater means are observed on product cost, input prices and product line. Interestingly, the retention of the management team and the formal organisational changes have a higher mean in the hostile takeovers.

	Measures	Friend N=130	ly)	Hostile N=6	
	Measures	Mean	Std. Deviat ion	Mean	Std. Devia tion
	Use of acquired business's product innovation capabilities	2.65	1.293	3.00	1.414
Resource	Use of acquired business's know-how in manufacturing process/ services	2.63	1.162	3.17	1.472
Redeployment of the	Use of acquired business's marketing expertise	2.52	1.143	2.83	1.169
Turger	Use of acquired business's supplier's relationship	2.80	1.074	3.50	0.837
	Use of acquired business's distribution expertise	2.87	1.254	3.00	1.095
	Transfer of product innovation capabilities	3.08	1.327	3.17	1.835
Resource Redeployment of the Acquirer	Transfer of know-how in manufacturing process/ services	3.18	1.338	3.17	1.835
	Transfer of marketing expertise	3.32	1.410	3.50	1.378
	Use of your existing business's supplier relations	3.38	1.296	3.50	1.378
	Transfer of distribution expertise	3.18	1.389	3.50	1.517
	Manufacturing Facilities and Workforce	2.01	1.340	2.17	1.125
Asset Divestiture of the Target	Distribution facilities and personnel	2.19	1.408	1.83	1.033
	Sales facilities and personnel	2.18	1.402	1.67	1.080
	Administrative facilities and personnel	2.48	1.545	1.75	0.822
	R&D facilities and personnel	2.09	1.465	1.75	0.935
	Manufacturing Facilities and Workforce		0.582	1.00	0.000
	Distribution facilities and personnel		0.710	1.08	0.204
Asset Divestiture of the Acquirer	Sales facilities and personnel	1.39	0.575	1.08	0.204
and i requirer	Administrative facilities and personnel	1.36	0.616	1.17	0.258
	R&D facilities and personnel	1.33	0.527	1.17	0.258
Innovation Canability	R&D Capabilities	3.97	0.818	3.58	0.801
nnovation Capability	Design Cycle	3.98	0.782	3.67	0.817
Cost Savings	Product Cost	4.03	0.750	4.08	0.801
Cost Savings	Input Prices	4.03	0.753	4.33	0.817
Market Coverage	Product Line	3.97	0.810	4.25	0.758
Market Coverage	Geographical Coverage	4.18	0.807	4.17	0.983
	Market Share	4.02	0.670	3.67	1.033
Post-Acquisition	Sales	3.92	0.794	3.33	1.033
Performance	Intrinsic Profitability	3.78	0.860	3.25	1.782
	Relative Profit	3.70	0.714	3.00	1.549
	Organisational network changes	4.05	0.806	3.33	1.033
Organisational	Organisational knowledge changes	3.95	0.806	3.83	1.169
Changes	Retention of the Management team	3.68	1.058	3.83	1.472
	Formal organizational changes	3.62	0.875	4.17	0.983

 Table 5.3: Classification of the acquisition

Those results even though inconclusive due to the small number of hostile acquisitions seem to follow the literature. The increased resource redeployment mean values for the hostile cases seem to be consistent with the literature that argues that corporate renewal is a two stage process; first managers maximise the individual businesses and then integrate them (Birkinshaw *et al.*, 2000; Ghoshal and Bartlett, 1995; Haspeslagh and Jemison, 1991). In addition regarding the organisational changes increased mean values in combination with the lower post-acquisition performance mean values, might be due to greater hostile takeover premiums paid.

A larger proportion of the acquirer's wealth might be applied on the acquisition itself and this can have as a result a negative effect on post-acquisition performance (Tuch and Sullivan, 2007). In addition, acquisitions are dependent on the process of learning and value creation especially in the post-acquisition integration phase (Shimizu et al., 2004). Therefore, an efficient post-acquisition transition is critical to avoid upsetting management structures and teams and provide improved integration of the resources (Kumar, 2009; Zollo and Meier, 2008). Finally, Sun *et al.*, (2012) suggested value in the transaction and the smooth transition of management teams can be created only by friendly negotiation with the target firm to reach a friendly takeover. Thus, taking into consideration the large number of friendly acquisitions, their classification is expected to have an effect on post-acquisition performance.

5.3. Acquisition Rationalisation

In Table 5.4 the statistics on the rationalisation of the acquisition are presented. In particular, the table shows the managers' attitude toward the importance of one of the following five reasons to go on with an acquisition: market share increase, geographical expansion, expansion in new product lines, cost efficiency and eliminate/reduce competition; the responses vary in scale from 1 to 5, with 1 representing the highest rank (most significant) and 5 the lowest (least significant). As such, the N/A section includes the number of respondents that did not provide a ranking for each respective rationalisation reason.

	N/A	Most significant	Significant	Neutral	Less significant	Least significant	Mean	SD
Market share	15	49	29	13	17	13		
increase	(11%)	(36%)	(21.3%)	(9.6%)	(12.5%)	(9.6%)	2.31	1.401
Geographical	20	28	15	26	26	21		
expansion	(14.7%)	(20.6%)	(11%)	(19.1%)	(19.1%)	(15.4%)	2.97	1.435
Expansion in	16	22	35	20	21	22		
new product	10)) ();	20	21	22	2.88	1.391
lines	(11.8%)	(16.2%)	(25.7%)	(14.7%)	(15.4%)	(16.2%)		
Cost efficiency	24	25	16	30	28	13		
	(17.6%)	(18.4%)	(11.8%)	(22.1%)	(20.6%)	(9.6%)	2.89	1.391
Eliminate/redu	35	11	12	26	16	36	3.53	1.368
ce competition	(25.7%)	(8.1%)	(8.8%)	(19.1%)	(11.8%)	(26.5%)		

Table 5.4: Acquisition Rationalisation N=136

The percentages for each rationalisation are also presented below. The main motive behind the rationalisation for the acquisition according to 49 out of 121 respondents was to increase market share (36%).

On the contrary, the motive that ranked last according to the questionnaire answers was to eliminate or reduce competition, where, out 101 respondents, 36 of them considered it as the as the least significant reason (26.5%).

The second most significant rationale was geographic expansion, as indicated by 20.6% of the respondents. Because of the expectation of increased post-acquisition performance given the larger number of domestic acquisitions in the sample and by taking into account Danbolt (2004) who argued that economies of scale may be easier to achieve in domestic than in cross-border acquisitions, it makes sense that managers chose the geographical expansion as an important motive.

Expansion in new product lines ranked 3^{rd} among responses, where 22 out of 120 (18.3%) respondents consider it as the most significant motive, and 35 (29.2%) viewed it as a significant rationale for an acquisition.

As far as cost efficiency is concerned, 25 out of the 112 respondents (22.3%) consider it as a significant motive while 30 (26.8%) gave it a score of 3 (neutral), which renders it 4^{th} .

5.4. Organisational Changes

Table 5.5 presents the statistics regarding the impact of organisational changes that took place within the business/es after the acquisition. Four items/ variables were used to capture these changes, namely post-acquisition network changes, post-acquisition knowledge changes, retention of the acquired firms' management team and formal organisational changes affected from the retention of the management team.

In the first item, the post-acquisition organisational network changes, has a mean of 4.01, which means that the 56 out of 136 respondents considered the network changes as a "positive Impact". It was previously argued in Chapter 2 that interpersonal networks add value (Achrol, 1997) and the Top Management Team's (TMT) network of internal and external affiliations in which a successful firm is rooted can play a significant role to the continuation of its success (Kiessling et al (2008).

Looking at the responses related to organisational knowledge change, 39.7% (54) rated these changes as "somewhat positive" and 28.7% (39) as "positive". Several authors argue that knowledge and the competencies built on this platform are the main factor in determining an organisation's current and future value (Thurow, 1996; Hamel, 2000). Organisational knowledge is considered as one of the most important resources of the organisation (Grant 1996; Kiessling et al., 2008) from a strategic point of view.

Shifting the focus to the organisational changes affected from the retention of management team from the acquired firm, 36% (49) of the respondents viewed them as "neutral" and 29.4% (40) as "positive". Differences in culture and management techniques can have a major negative impact on acquisition performance (Chatterjee et al 1992; Datta 1991).

Finally, 32.4% (44) of the respondents viewed the formal organisational changes affected from the retention of the acquired firm as "somewhat positive". Differences in

top management styles have a negative impact on post-acquisition performance (Datta 1991). In addition, differences in culture and management styles can have significant negative impact on acquisition performance (Chatterjee et al 1992; Datta 1991).

	Negative Impact	Somewhat Negative	Neutral	Somewhat Positive	Positive Impact	Mean	SD
Post-acquisition organisational network changes	0	4 (2.9%)	33 (24.3%)	56 (41.2%)	43 (31.6%)	4.01	0.82
Post-acquisition organisational knowledge changes	0	3 2.2%	40 29.4%	54 39.7%	39 28.7%	3.95	0.81
Retention of the acquired firm's management team	4 2.9%	11 8.1%	49 36 %	32 23.5%	40 29.4%	3.68	1.07
Formal organisational changes affected from the retention of the acquired firm	2 1.5%	5 3.7%	59 43.4%	44 32.4%	26 19.1%	3.64	0.88

Table 5.5: Organisational Changes N=136

Given that one important organizational change is the retention (or not) of the target's top management team, respondents were asked to indicate the number of senior executives (i.e. chairman, president, CFO) that were made redundant following the acquisition. Table 5.6 shows that for 49.3% of the cases examined, no executive was made redundant, followed by 11.6% of deals, where two executives from the top management team were made redundant following the acquisition. Finally, no information regarding the senior executives that were made redundant (N/A) was provided in 6 cases (4.3%).

Executives Left	Frequency	Percentage %	
None	67	49.3	
One	12	8.8	
Two	16	11.8	
Three	16	11.8	
Four	6	4.4	
Five	9	6.6	
Six	1	0.7	
Seven	2	1.5	
Ten	1	0.7	
N/A	6	4.4	
Total	136	100	

Table 5.6: Senior Executives made redundant

The departure of an acquired firm's top managers, and the consequent loss of their knowledge and skills, is thought to be an important determinant of poor post-acquisition performance (Cannella and Hambrick, 1993). Therefore, a negative relationship with the senior executive redundancies and post-acquisition performance is expected.

5.5. Post-acquisition Divestiture Measures

This section presents the statistics of the respondent's answers to questions regarding their assessment of the rationalisation and restructuring measures that have been implemented following the acquisition. After the acquisition a vigorous restructuring starts that involves a significant number of sell-offs and closures of the target firm's assets (Maksimovic, 2011). The managers responded to the questions from two different perspectives that of a) the acquired business and, b) existing business.

Table 5.7 presents statistics on the responses related to the targets' degree of consolidation and restructuring across five functions, namely: manufacturing, distribution and services, sales networks, administrative services and R&D. Those functions were also divided into two parts: a) consolidation/restructuring of physical manufacturing facilities and/or points of services, and, b) reduction in manufacturing/services workforce following the acquisition. Five thresholds were defined in order to capture to what percentage the assets and the personnel were affected (0-20%, 21-40%, 41-60%, 61-80% and 81-100%).

Acquired Business	0-20%	21-40%	41-60%	61- 80%	81- 100%
% of physical manufacturing facilities/ points of services closed or resold	73	24	14	8	17
	(53.7%)	(17.6%)	(10.3%)	(5.9%)	(12.5%)
% of manufacturing/services workforce cut	74	26	15	7	14
	(54.4%)	(19.1%)	(11%)	(5.1%)	(10.3%)
% of physical distribution facilities closed or resold	63	30	16	5	22
	(46.3%)	(22%)	(11.8%)	(3.7%)	16.2%
% of distribution personnel cut	63	34	15	6	18
	46.3%	25%	11%	4.4%	13.3%
% of sales networks closed or resold	62	33	18	1	22
	45.6%	23.9%	13%	0.7%	15.9%
% of sales personnel cut	65	27	20	7	17
	47.8%	19.6%	14.7%	5.1%	12.5%
% of administrative services closed	57	24	16	9	30
	41.9%	17.6%	11.8%	6.6%	22.1%
% of administrative personnel cut	58	27	14	13	24
	42.6%	19.9%	10.3%	9.6%	17.6%
% of physical R&D facilities closed or resold	74	25	10	3	25
	54.4%	18.4%	7.4%	2.2%	17.6%
% of R&D personnel cut	76	24	10	7	19
	55.9%	17.6%	7.4%	5.1%	14%

Table 5.7: Consolidation and Restructuring of Acquired Business N=136

The statistics illustrate that the degree of post-acquisition asset divestiture varies across the five functions and the various levels. Specifically, the extent of *asset divestiture* was concentrated in the 0-20% threshold of assets divested for the majority of cases. Specifically, in 54.4% of the deals the acquisition resulted in closing down or reselling up to 20% of the Physical R&D facilities of the acquired firm; this could be explained by the fact that a further R&D consolidation of the acquired business would risk damaging the innovative capabilities of the acquired firm.

Similar observations can be made on distribution, services and sales networks, with 45% to 47% divesting only 0-20% of their assets, as the commercial presence and image of the firm could easily be hindered.

Also it is worth noting that for the administrative services 42% of the companies' divested 0-20% of their assets. Also, 20% to 22% of the acquirers divested above the 81% threshold of their assets, because the firm can easily undertake divestiture measures with a lower risk of damaging performance (Capron, 1999)

Table 5.8 presents the respondents' indication of the percentage of consolidation and restructuring that took place for the existing business across five functions (manufacturing, distribution and services, sales networks, administrative services and R&D).

Existing Business	Percentage	0-20	21-40	41-60	61-80	81-100
% of physical manufacturing facilities		87 (64%)	40 (29.4%)	7 (5.1%)	2 (1.5%)	0
% of manufacturing/services workforce cu	ıt	102 (75%)	30 (22%)	2 (1.5%)	2 (1.5%)	0
% of physical distribution facilities closed	or resold	79 58.1%	48 35.3%	6 4.4%	2 1.5%	1 0.7%
% of distribution personnel cut		92 67.6%	36 26.5%	5 3.7%	1 0.7%	2 1.5%
% of sales networks closed or resold		86 62.3%	46 33.3%	5 3.6%	1 0.7%	0
% of sales personnel cut		101 74.6%	28 20.3%	6 4.3%	$1 \\ 0.7\%$	0
% of administrative services closed		92 67.6%	38 27.9%	4 2.9%	1 0.7%	1 0.7%
% of administrative personnel cut		100 73.5%	31 22.8%	4 2.9%	0	1 0.7%
% of physical R&D facilities closed or res	sold	95 69.9%	34 25%	6 4.4%	1 0.7%	0
% of R&D personnel cut		102 75%	31 22.8%	3 2.2%	0	0

Table 5.8: Consolidation and Restructuring of Existing Business (N=136)

Consistent with the structure of the above question, those functions were divided to two parts: a) consolidation/restructuring of physical manufacturing facilities and/or points of services, and, b) reduction in manufacturing/services workforce following the acquisition. The results indicate that for the most cases, the acquirers divested their assets less than or equal to 20% across all of the five functions.

Having analysed the results for both the target and the acquirer a comparison of the extent of asset divestiture of the target and acquiring firms were made. For example, looking into the 61% and above threshold (61% to 100%) of the assets divested following the acquisition, a total of **18.4**% (=12.5% + 5.9%) was reported as far as the reduction in the *physical manufacturing facilities and/or points of services closed* of the target firm was concerned; the corresponding figure for the acquiring firm was **1.5**% (=1.5%+0%). The same held across all functions. Therefore, the target's assets were

divested in greater numbers than the acquirer's assets. Of course, the fact that the target's assets are more likely to be divested than the acquirer' is a finding consistent with those in the literature (see Capron *et al.*, 2001; Maksimovic, 2011).

Figure 5.7 shows the estimates for the relevant ratio across other types of assets. It is clear that asset divestiture involves mainly the target's assets.



Figure 5.7: Extent of Asset Divestiture across Acquiring and Target Firms

According to Capron (1999), one can effortlessly undergo asset divestiture measures with a decreased risk of impairing the innovative capabilities of the business, its commercial presence or even its image on the market. The statistics in Table 5.7 and Table 5.8 suggest that post-acquisition divestiture measures have a differential impact upon the acquirer and the target. The data indicate therefore that the target's assets are more likely to be divested than that of the acquirer's something which is consistent with the literature (Capron et al 2001; Maksimovic, 2011).

5.6. Post-acquisition Resource Redeployment Measures

This section presents the post-acquisition resource redeployment measures. A firm's ability to deploy resources through organisational capabilities may be more important than absolute resource levels in driving performance (DeSarbo, et al, 2007).

In the survey managers were asked questions related to the transfer of resources, knowledge and capabilities across the acquired business and the existing business in order to capture the two means of enhancing revenues. Scales from 1 to 5 were used to assess the extent to which people have been collaborating and resources have been transferred, where 1 was "not at all" and 5 being "to a very large extent".

Tables 5.9 and 5.10 report the extent of resource redeployment across five resource categories of the target. Specifically, Table 5.9 presents the redeployment of resources from the target in order to assist the existing business. The descriptive statistics revealed that across all five categories the majority of the respondents reported that their businesses redeployed resources to "some extent". For instance, R&D was mostly redeployed to "some extent" (33.1%), manufacturing was 27.9%, marketing (28.7%), supplier relationship (36%) and distribution expertise (26.5%). The above statistics are consistent with (Capron 1999), who states that redeployment from the target to the acquirer is rather uncommon.

Across all five categories the majority of the respondents reported that their businesses redeployed resources to "some extent". Also it is clear that redeployment "to a large extent" or to "a very large extent" was less common for the resource redeployment from targets to acquirers. R&D was mostly redeployed to "some extent" (33.1%), manufacturing was 27.9%, marketing (28.7%), supplier relationship (36%) and distribution expertise (26.5%). The above statistics are consistent with (Capron 1999), who states that redeployment from the target to the acquirer is rather infrequent.

Acquired Business	Not at all	Very Little	To Some Extent	To a Large Extent	To a Very Large Extent	Mean	Sd
Use of acquired business's product innovation capabilities	31 (22.8%)	23 (16.9%)	45 (33.1%)	25 (18.4%)	12 (8.8%)	2.74	1.24
Use of acquired business's know-how in manufacturing process/services	26 (19.1%)	38 (27.9%)	38 (27.9%)	25 (18.4%)	9 (6.6%)	2.65	1.17
Use of acquired business's marketing expertise	30 (22.1%)	38 (27.9%)	39 (28.7%)	23 (16.9%)	6 (4.4%)	2.54	1.14
Use of acquired business's supplier relationship	19 (14%)	29 (21.3%)	49 (36%)	34 (25%)	5 (3.7%)	2.83	1.07
Use of acquired business's distribution expertise	24 (17.6%)	29 (21.3%)	36 (26.5%)	34 (25%)	13 (9.6%)	2.88	1.24
N_126							

N=136

Table 5.9: Use of Resources from the acquired business to assist existing business

Table 5.10 presents the findings related to the redeployment of resources from the existing business to the target. Conversely, looking into the descriptive statistics for redeployment of resources from the acquirer in order to assist the target revealed that across all five categories the majority of the respondents reported that their businesses redeployed resources to "a larger extent". Specifically, it was observed for R&D (27.9%), manufacturing (36%), marketing (30.1%), supplier relationship (30.1%) and distribution expertise (30.9%). Again, those statistics are consistent with Capron (1999), and Capron *et al.*, (2001) who showed that redeployment from the acquirer to the target is frequent.

Existing Business	Not at all	Very Little	To Some Extent	To a Large Extent	To a Very Large Extent	Mean	Sd
Transfer of product innovation capabilities to	24	23	29	38	22	3.08	1.345
the acquired business	(17.6%)	(16.9%)	(21.3%)	(27.9%)	(16.2%)		
Transfer of know-how in manufacturing process/	23	23	19	49	22	3.18	1.355
services to the acquired business	(16.9%)	(16.9%)	(14%)	(36%)	(16.2%)		
Transfer of marketing expertise to the acquired	23	16	23	41	33	3.33	1.404
business	(16.9%)	(11.8%)	(16.9%)	(30.1%)	(24.3%)		
Use of your existing	16	18	31	40	31	3.38	1.294
by the acquired business	(11.8%)	(13.2%)	(22.8%)	(29.4%)	(22.8%)		
Transfer of distribution	26	16	26	42	26	3.19	1.391
business	(19.1%)	(11.8%)	(19.1%)	(30.9%)	(19.1%)		

N=136

Table 5.10: Use of Resources from the Existing Business to assist acquired business

Figure 5.8, presents a comparison of the extent of resource redeployment across the acquiring firm and the target yielded some interesting results. In order to calculate the degree of redeployment, the percentages of the responses "to a large extent" and "to a very large extent" for the acquiring firm and the target firm were summed up. A total of **27.2%** (=18.4%+8.8%) of the respondents declared there was redeployment of R&D to the acquiring firm; that is, the acquiring firm used the target firm's **product innovation capabilities** "to a large extent" or "to a very large extent", whereas, a total of **44.1%** (=27.9%+16.2%) of the respondents believed that the target firm used the acquiring firm used the acquiring firm used the acquiring the acquiring firm used the target firm used the acquiring firm's **product innovation** capabilities "to a large extent" or "to a large extent" or "to a very large extent" or "to a very large extent".

The extent of redeployment to target (i.e. the movement of resources from the acquirer to the target) was greater than the extent of redeployment to the acquiring firm. Thus, in the sampled cases of M&A activity, resources moved from the acquirers to the target companies. The above findings are consistent with Capron (1999) who stated that larger

redeployment from the acquirer to the target is commonly used in order to enhance postacquisition performance



Figure 5.8: Extent of Resource Redeployment across Acquiring and Target Firms

5.7. Value-creating Mechanisms

Tables 5.11, 5.12 and 5.13 present the statistics regarding the impact of the acquisition (cost savings, market coverage and innovation capability) on the acquired, existing business and consolidated business. As it was mentioned in Chapter 2 the model in this thesis considers three ways of improving revenues:

First, opportunities for *cost savings* (product costs and input prices), achieved through divestiture of redundant assets, which can significantly be enhanced as the degree of relatedness increases and as the redeployment of resources into new areas takes place (Capron *et al.*, 1998; Penrose, 1959; Teece, 1980, 1982).

Second, is the increased *market coverage* (broadening of product line and geographical coverage). According to Aaker (1996) and Srivastava *et al.* (1998) *market coverage* can be increased in acquisitions through the geographic and product line expansion. Expanding across geography enables businesses to sell their products to whole new markets, which may result in increased revenues.

Third, *enhanced innovation capability* (R&D capabilities and design cycle) (Capron, 1999). *Innovation capability* can be converted into price premium and/or increased volume, resulting into higher profits (Capron and Hulland, 1999). The reason being that the exploitation of these revenue-based synergies (increased market coverage and innovation capability) is usually realized through resource redeployment.

Acquisitions can be seen as means to enhance performance by providing businesses with the opportunity to obtain preferential access to resources that cannot be purchased in a competitive market (Peteraf, 1993; King *et. al 2008*). Therefore, acquisitions can create value and enhance revenues by redeploying resources from the target to the acquirer and/or, from the acquirer to the target, respectively (Capron 1999).

The questionnaire was divided into two sections (A and B) for these questions in order to capture all of the three cases. Section A referred to the acquired and existing business and Section B to the consolidated one. Out of the 136 respondents, 59 (43.5%) answered Section A and 77 (56.5%) answered Section B.

Table 5.11 reports the impact of acquisition on the acquired business. The majority of respondents reported a "positive impact". Specifically, regarding *innovation capability* (R&D and Design Cycle) the percentages of responses registering a "positive impact" were 45.8% for the R&D capabilities and 42.4% for the design cycle.

Regarding *Cost Saving* (Product Costs and Input Prices) the percentage that responded that there was a "positive impact" was 49.2% for the product costs and 47.5% for the input prices.

Finally, as far as *market coverage* (Broadening of Product Line and Geographical Coverage) was concerned, the percentage of the respondents that replied with a "positive impact" was 33.9% for the broadening of the product cycle and 62.7% for the geographical coverage.

Acquired Business	Negative Impact	Somewhat Negative	Neutral	Somewhat Positive	Positive Impact	Mean	Sd
R&D capabilities	-	2 (3.4%)	14 (23.7%)	16 (27.1%)	27 (45.8%)	4.15	0.906
Design cycle	-	1 (1.7%)	14 (23.7%)	19 (32.2%)	25 (42.4%)	4.15	0.847
Product costs	-	-	15 (25.4%)	15 (25.4%)	29 (49.2%)	4.24	0.837
Input Prices	-	-	12 (20.3%)	19 (32.2%)	28 (47.5%)	4.27	0.784
Broadening of product line	-	-	17 (28.8%)	22 (37.3%)	20 (33.9%)	4.05	0.797
Geographical coverage	-	-	12 (20.3%)	10 (16.9%)	37 (62.7%)	4.42	0.814
N=59							

 Table 5.11: Impact of the Acquisition on the position of the acquired business

 (Section A)

Table 5.12 presents the statistics regarding the impact of the acquisition on the position of the existing business. The majority of the respondents' reported that for the existing business the impact ranged from "neutral" to "positive impact".

Specifically, regarding *innovation capability* (R&D and Design Cycle) the percentage of responses that indicated a "neutral impact" was 45.8% of the responses for R&D capabilities and 44.1% for the design Cycle.

Nevertheless, for *cost* savings (product costs and input prices) the answers indicated a "somewhat positive" impact for the product costs (40.7%) and for the input prices (45.8%).

Finally for *market coverage* (Broadening of Product Line and Geographical Coverage) indicated that for the broadening of the product cycle 44.1% indicated a "somewhat positive" impact, whereas, for geographical coverage the responses indicated a positive impact with a 54.2%.

Existing Business	Negative Impact	Somewhat Negative	Neutral	Somewhat Positive	Positive Impact	Mean	Sd
DOD comphilition		2	27	17	13	3.69	0.856
K&D capabilities	-	(3.4%)	(45.8%)	(28.8%)	(22%)		
Design cycle		1	26	21	11	3.71	0.789
	-	(1.7%)	(44.1%)	(35.6%)	(18.6%)		
Product costs			24	23	12	3.8	0.761
	-	-	(40.7%)	(39%)	(20.3%)		
Innut Duissa		1	19	27	12	3.85	0.761
Input Prices	-	(1.7%)	(32.2%)	(45.8%)	(20.3%)		
Broadening of			17	26	16	3.98	0.754
product line	-	-	(28.8%)	(44.1%)	(27.1%)		
Geographical			14	13	32	4.31	0.836
coverage	-	-	(23.7%)	(22.1%)	(54.2%)		
N-59					· · · ·		

 Table 5.12: Impact of the Acquisition on the position of the existing business

 (Section A)

Table 5.13 portrays the impact of the acquisition on the position of the consolidated business. Most of the respondents indicated that for the consolidated business the impacted extended from "neutral" to "positive".

So, regarding *innovation capability* (R&D and Design Cycle) it was reported that for the R&D capabilities 33.8% indicate a "somewhat positive" impact and for design cycle 33.8% a positive impact.

For *cost* savings (product costs and input prices) the answers indicated "somewhat positive" impact for product costs (40.3%) and a "positive" impact (35.1%) for input prices.

For *market coverage* (Broadening of Product Line and Geographical Coverage) a "somewhat positive" impact was reported (37.6%) for the broadening of the product line and finally the respondents indicated a "positive impact" for the geographical coverage (37.7%).

Consolidated	Negative Impact	Somewhat Negative	Neutral	Somewhat Positive	Positive Impact	Mean	Sd
D&D conchilition		1	25	26	25	3.97	0.843
K&D capabilities	-	(1.3%)	(32.5%)	(33.8%)	(32.5%)		
Design cycle		1	25	25	26	3.99	0.851
	-	(1.3%)	(32.5%)	(32.5%)	(33.8%)		
Deve deve to a set		2	18	31	26	4.05	0.826
Product costs	-	(2.6%)	(23.4%)	(40.3%)	(33.8%)		
Innut Duissa			24	26	27	4.04	0.818
Input Prices	-	-	(31.2%)	(33.8%)	(35.1%)		
Broadening of		1	25	29	22	3.93	0.818
product line	-	(1.3%)	(32.5%)	(37.6%)	(28.6%)		
Geographical			26	22	29	4.04	0.85
coverage	-	-	(33.8%)	(28.6%)	(37.7%)		
N_77							

N=77

Table 5.13: Impact of the Acquisition on the position of the consolidated business (Section B)

It is evident that in all of the three cases (acquired, existing and consolidated business) that the impact of the acquisition was viewed as positive by the managers in the sample. Taking into consideration, that value is created through the acquisition, it is anticipated that post-acquisition performance will be enhanced.

5.8. Acquisition Performance

The respondents were asked to rate the long-term performance of the acquisition by providing self-reported figures of changes in market share, sales, intrinsic profitability and relative profitability compared to the industry average since the acquisition.

The questionnaire was divided into two sections (A and B) to distinguish between the two types of post-acquisition integration. Specifically, section A referred to the acquired and existing business and section B to the consolidated one. So, 43.5% of the respondents answered the section regarding the Section A and whereas the remaining 56.5% answered the section regarding the consolidated business Section B. As above, the valid percentages are presented below each item. Tables 5.13, 5.14 and 5.15 present results on the acquisition performance for the acquired and existing business (Section A) and on the consolidated business (Section B).

Table 5.14 depicts the change of the acquisition performance for the acquired business. The respondent's answers ranged from some increase to a significant increase for the best part of the data. Regarding the *market share*, 50.8% reported "some increase" and 27.1% reported a "significant increase"; something consistent with the figures for sales, whereas the figures for *intrinsic profitability* are almost similar.

Acquired Business	Significa nt Decline	Some Decline	No Change	Some Increase	Significa nt Increase	Mean	Sd
Market share	-	2 (3.4%)	11 (18.6%)	30 (50.8%)	16 (27.1%)	4.02	0.777
Sales	-	6 (10.2%)	7 (11.9%)	30 (50.8%)	16 (27.1%)	3.95	0.899
Intrinsic profitability (Profit/capital employed)	1 (1.7%)	4 (6.8%)	5 (8.5%)	30 (50.8%)	19 (32.2%)	4.05	0.918
Profitability relative to industry average	1 (1.7%)	-	10 (16.9%)	40 (67.8%)	8 (13.6%)	3.92	0.677

N=59

Table 5.14: Acquisition Performance Acquired Business (Section A)

Table 5.15 represents the change of the acquisition performance for the existing business. The majority of the respondent's answers reported "some increase". In regards to market share 57.6% reported some increase, the same holds for sales (61%), intrinsic profitability (62.7%) and profitability (55.9%).

Existing Business	Signific ant Decline	Some Decline	No Change	Some Increase	Signific ant Increase	Mean	Sd
Market share	-	2 (3.4%)	15 (25.4%)	34 (57.6%)	8 (13.6%)	3.81	0.706
Sales	-	5 (8.5%)	12 (20.3%)	36 (61%)	6 (10.2%)	3.73	0.762
Intrinsic profitability (Profit/capital employed)	1 (1.7%)	7 (11.9%)	9 (15.3%)	37 (62.7%)	5 (8.5%)	3.64	0.866
Profitability relative to industry average	1 (1.7%)	3 (5.1%)	18 (30.5%)	33 (55.9%)	4 (6.8%)	3.61	0.766

N=59

Table 5.15: Acquisition Performance Existing Business (Section A)

Finally, Table 5.16 depicts the change of the acquisition performance for the consolidated business. Most of the answers reported "some increase". Regarding the market share 58.4% reported "some increase", the same holds for sales (53.2%), intrinsic profitability (54.5%) and profitability (50.6%).

Consolidated	Significa nt Decline	Some Decline	No Change	Some Increase	Significa nt Increase	Mean	Sd
Market share	_	3	9	45	20	4.06	0.732
What Ket Share		(3.9%)	(11.7%)	(58.4%)	(26%)		
Calas	1	5	11	41	19	3.94	0.879
Sales	(1.3%)	(6.5%)	(14.3%)	(53.2%)	(24.7%)		
Intrinsic profitability (Profit/capital employed)	5 (6.8%)	3 (3.9%)	15 (19.5%)	42 (54.5%)	12 (15.6%)	3.69	1.003
Profitability relative to	2	5	23	39	8	3.6	0.862
industry average	(2.6%)	(6.4%)	(29.9%)	(50.6%)	(10.4%)		
N=77							

 Table 5.16: Acquisition Performance Consolidated Business (Section B)

It is clear from the previous tables, that across all businesses (acquired and existing 59 out of 136, and consolidated 77 out of 136) managers' report "some increase" on post-acquisition performance. Drawing from the resource-based theory of the firm and given the descriptive statistics presented in this chapter the expectation of an increased post-acquisition performance holds true.

5.9. Summary

This chapter's aim was to document and present the descriptive findings generated from the data collected. Therefore, descriptive statistics for all the variables, dimensions and constructs that are part of the study's research model were presented. An adequate distribution of responses was found to exist for all relevant measures employed for the purpose of the empirical part of the study.

By looking into the classifications of the sample industries a better comprehension was achieved for the kind of companies that were in the sample and that operate in Greece. Also, Following Capron (1999) and Seth (1990b) there is an expectation that the relative size of acquirers and target favours the exploitation of operational synergies and therefore an enhanced acquisition performance is expected taking into account the number of the small targets in the data.

In addition, according to the responses that the managers provided, the statistics indicated that the majority of the companies were related. Considering the geographic scope of the firms, and given the business sectors and the large number of the domestic number in the sample, there is the expectation that the acquisition geographic scope will enhance post-acquisition performance. The underlying motives that will prompt a company to acquire related or unrelated businesses have received great attention in strategy research, yet little agreement on the relationship between diversification and post-acquisition performance exists (Palich et al., 2000; Teece, 1982). In theory, diversification must contribute to superior performance to the point where resources become too complex to manage or business units become unrelated (Wan et al., 2011).

The majority of the targets are domestic and originated from Greece, the home country and industry can have a significant effect on the fate of an acquisition, because of the presence of country specific resources, culture, and institutions that stimulate the development of specific industries over others (McGahan, and Victer, 2009; Tallman and Li, 1996; Wright, *et al.*, 2005).

Moreover the vast majority of the respondents indicated that cash as the medium of financing the deal, and in general, the existing evidence suggests that cash acquisitions 157

outperform equity bids. Almost all of the cases reviewed in this study, are characterised as friendly acquisitions and taking into consideration that substantial majority, there is an expectation of an increased post-acquisition performance.

Organisational changes are viewed as positive from the sample therefore the expectation exists for an enhanced acquisition performance. Furthermore given that the majority of the businesses in the sample had none to a very small amount of top management team redundancies, a greater post-acquisition performance is expected.

The statistics illustrated that the degree of post-acquisition asset divestiture for the target varies across the five functions and the various levels. Specifically, the extent of *asset divestiture* was concentrated in the 0-20% threshold of assets divested for the majority of cases. In addition, the statistics for the respondents' indication of the percentage of consolidation and restructuring that took place for the existing business across the same five functions the results indicated that for the most cases, the acquirers divested their assets less than or equal to 20% across all of the five functions. Therefore, the target's assets were divested in greater numbers than the acquirer's assets the fact that the target's assets are more likely to be divested than the acquirer' is a finding consistent with those in the literature.

The descriptive statistics regarding the redeployment of resources from the target in order to assist the existing business revealed that across all five categories the majority of the respondents reported that their businesses redeployed resources to "some extent".

As far as the post-acquisition measures are concerned, the data indicated that the target's assets are more likely to be divested than those of the acquirer's, something consistent with the literature (Carpon 1999). This increases the probability of enhanced post-acquisition performance. Conversely, looking into the descriptive statistics for redeployment of resources from the acquirer in order to assist the target revealed that across all five categories the majority of the respondents reported that their businesses redeployed resources to "a larger extent". Therefore, the extent of redeployment to target (i.e. the movement of resources from the acquirer to the target) was greater than the extent of redeployment to the acquiring firm.

It is evident that in all of the three cases (acquired, existing and consolidated business) that the impact of the acquisition was viewed as positive by the managers in the sample. Therefore, taking into consideration, that value is created through the acquisition, it was anticipated that post-acquisition performance will be enhanced.

Finally, the findings showed, that across all businesses (acquired, existing and consolidated) managers' report "some increase" on post-acquisition performance.

As far as the post-acquisition measures are concerned, the data indicated that the target's assets are more likely to be divested than those of the acquirer's, something consistent with the literature (Carpon, 1999). This increases the probability of enhanced post-acquisition performance.

Having analysed the descriptive statistics of the sampled data, further statistical analysis is needed in order to better understand the relationships among asset divestiture, resource redeployment, cost savings, market share, innovation capability and postacquisition performance.

6. Factor Analysis

6.1. Introduction

In this chapter the factor analysis process is going to be explored. In this section all the relevant tables concerning factor analysis are presented. The first set of tables presents the results of performing factor analysis on all the variables of the model. All the factors and latent variables that were hypothesised in Chapter 3 and 4 are recognised in the following factor analysis. Therefore the process of structural equation modelling follows on Chapter 7 along with the corresponding results. All of the factor analysis outputs are depicted in Appendix IV.

6.2. Factor analysis

As mentioned in Chapter 4, there exist two basic methods for obtaining factor solutions. Those are the Principal Components analysis and the Common Factor analysis (maximum likelihood). The choice between these two basic methods of factor extraction lies with the objective of the researcher. For the purpose of analysis in this thesis the Principal component analysis was used because it has the strong advantages of being free of distributional assumptions and of being less prone to improper solutions than maximum likelihood (Fabrigar *et al.*, 1999). Also, principal components analysis was chosen because the objective is to obtain the minimum number of factors and understand whether these perceptions can be "grouped" into factors that explain the underlying perceptions of the theory.

Having decided on the method the next decision is the number of factors to be extracted. The solution to determining the number of initial unrotated factors is the latent root criterion (Eigenvalues) and the Scree test criterion (Hair *et al.*, 2010; Ho, 2006).

Factor analysis can identify the structure of a set of variables as well as provide a process for data reduction. In this instance, the perceptions of post-acquisition performance on 34 attributes are examined in order to understand whether these perceptions can be "grouped" and whether the 34 variables can be reduced to a smaller number. Either or both objectives may be found in a research question, making factor

analysis applicable. Also, all the variables are metric and constitute a homogenous set of perception appropriate for factor analysis.

Another important aspect in factor analysis is the size of the sample. There exist different opinions relating to the minimum sample size for factor analysis (MacCallum et al., 2001). In general it is accepted that larger samples are better even though in some cases they can become contradictory (Comrey and Lee, 1992; Cudeck and O'Dell, 1994; Kline, 1994; MacCallum et al., 1999; Mundfrom et al., 2005; Velicer, et al., 1982). As far as factor analysis is concerned, several authors have recommended the "rule of 100", that the sample size should be equal to or greater than 100 observations (Gorsuch, 1983; Hair et al., 2010, Kline 1994; MacCallum et al., 1999). Moreover, according to Mundfrom et al., (2005), if there are more than 6 factors, the minimum sample size required is 100. According to their results with the variables-to-factor ratio set at 7 with high levels of communality and the "excellent" agreement criterion (level of congruence) the minimum sample varied from 75 to 100. The relation therefore between the minimum necessary sample size and the number of variables for a fixed number of factors according to Mundfrom et al., (2005) seem to be compensatory not proportional. This compliments a study by Marsh et al., (1998) by drawing the same conclusion with regards the confirmatory factor analysis.

6.2.1. Correlation Matrix

The underlying statistical assumptions influence factor analysis to the extent that they affect the derived correlations. The first step is a visual examination of the correlations, identifying those that are statistically significant.

Table 6.1 presents the correlation matrix for the 34 variables that try to capture postacquisition performance. All the values that are bold in table 6.1 have a significant correlation at the 0.01 level (2-tailed). A preliminary inspection of the correlations reveals that 69 are significant at the 0.01 level out of the 34 variables, something that is considered as an adequate basis for progressing to a further examination of adequacy for factor analysis (Hair *et al.*, 2010). On the one hand, even though no limits can be placed on what is considered as too high or too low a correlation, factors that have not any significant correlations might not consist a part of any factor. On the other hand if a variable has a large number of significant correlations it can consist as a part of several factors.

6.2.2. Factor Analysis Output

According to Ho, (2006), the **Kaiser-Meyer-Olkin Measure of Sampling Adequacy** is a statistic that specifies the proportion of variance in the variables that might be caused by underlying factors. Factor analysis can be suitable for the study's data if values are close to 1.0. Therefore with a corresponding value of 0.786 factor analysis is appropriate. Moving on, in order to examine the adequacy of the correlation matrix the Bartlett's test of sphericity can be employed. Looking at the correlation matrix (Table 6.1) it is clear significant correlations among the variables exist. Moreover, the expectation that the observed correlation matrix has small off-diagonal coefficients signifies the existence of independent variables. Thus, factor analysis attempts a more parsimonious understanding of the co-variation among a set of indicators because the

Table	6.1:	Correl	lations

	Variables	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15
X1	Target Divestiture of Manufacturing	1														
X2	Target Divestiture of Distribution	$.847^{**}$	1													
X3	Target Divestiture of Sales	$.804^{**}$	$.887^{**}$	1												
X4	Target Divestiture of Administration	$.709^{**}$.744**	.696**	1											
X5	Target Divestiture of R&D	.775**	$.804^{**}$	$.760^{**}$.794**	1										
	Acquirer Divestiture of															
X6	Manufacturing	532**	434**	398**	338**	378**	1									
X7	Acquirer Divestiture of Distribution	.519**	.396**	.371**	.385**	.382**	.813**	1								
X8	Acquirer Divestiture of Sales	502**	438**	409**	332**	417**	887**	746**	1							
110	Acquirer Divestiture of			,	.002		1007	.,								
X0	Administration	477^{**}	397**	365**	205*	269**	731**	578**	647^{**}	1						
X10	Acquirer Divestiture of R&D	519**	417**	392**	374**	414**	797**	653**	813**	772**	1					
110	Redenloyment of Target's Product	.517	. 417	.572	.574	. 414	.171	.055	.015	.772	1					
X 11	Innovation	335**	378**	364**	208**	420**	2/18**	2/11**	230**	257**	201**	1				
X12	Redeployment of Target's Know-how	232**	.526 215*	.30 4 227**	107	. 1 20 234**	233**	238**	212*	188*	252**	7/0**	1			
A12	Redeployment of Target's Marketing	.232	.213	.221	.107	.2.34	.255	.230	.212	.100	.232	./+/	1			
X13	Expertise	270**	181*	134	138	204*	262**	100*	100*	202**	262**	640**	5/18**	1		
A15	Padeployment of Torget's Supplier's	.219	.101	.134	.136	.204	.202	.199	.190	.292	.202	.040	.540	1		
V 14	Redeployment of Target's Supplier's	218*	236**	128	107	195*	204**	240**	282 **	212*	250**	407**	570**	632**	1	
A14	Relationship Redeployment of Torget's	.210	.230	.120	.107	.105	.294	.249	.202	.212	.239	.497	.570	.032	1	
V15	Distribution Exportion	100	141	110	072	000	142	140	002	100	000	410**	166**	612**	622**	1
А13	Distribution Expertise	.109	.141	.119	.072	.090	.142	.140	.085	.108	.098	.410	.400	.045	.025	1
V16	Redeployment of Acquirer's Product	120	120	1.40	077	072	005	076	001	022	026	027	024	054	227**	007
X10	Innovation	138	120	142	077	072	005	076	001	022	.026	027	024	.054	237	007
V17	keepioyment of Acquirer's Know-	242**	150	22.4**	100*	200*	002	0(0	014	005	024	1/0	007	124	20.4*	049
X17	how	243	158	224	182	209	.002	068	014	085	034	168	08/	124	204	048
3710	Redeployment of Acquirer's	0.4.4**	o 1 5**	Q 4 4**	0.5.1**	a = 0**	014	100	0.2.6	000	0.00	10.0*	100	101	0(1	117
X18	Marketing Expertise	244	245	344	251	259	014	136	036	008	.020	182	128	.101	061	.117
	Redeployment of Acquirer's Supplier	o **	a 40**	**	• •**	* * **										
X19	Relationship	312	240	230	237	250	026	125	045	121	042	090	.000	.051	.020	.071
	Redeployment of Acquirer's	**	*	**	**	**						* *				**
X20	Distribution Expertise	235	212	236	271	323	014	115	040	076	030	211	077	.061	053	.224
X21	Organizational network changes	.044	.114	.137	.112	.092	.090	.033	.075	.093	.110	.178	.227	.251	.204	.334
X22	Organizational knowledge changes	139	109	110	067	097	030	042	062	.007	.022	.060	.158	.093	.041	.103
X23	Retention of the Management team	043	114	154	198*	190*	044	034	053	009	.005	.056	.083	.279**	.121	.114
X24	Formal organizational changes	080	103	097	152	161	.000	121	031	.087	.103	.158	.257**	.289**	.115	.127
Y1	(Value) R&D Capabilities	.238**	.230**	.259**	.191*	.260**	.156	.130	.159	.154	.272**	.341	.271	.218*	.122	.212*
Y2	(Value) Design Cycle	008	.011	.026	.054	.111	.088	.136	.086	.082	.212*	.335	.292**	.296	.178*	.334**
Y3	(Value) Product Cost	.126	.175*	.165	.131	.158	.041	.013	.085	.081	.150	.349**	.300**	.241**	.294**	.235**
Y4	(Value) Input Prices	119	077	119	105	081	032	179*	029	005	.064	.123	.181*	.159	$.280^{**}$.192*
Y5	(Value) Product Line	.090	.091	.099	.053	.079	.008	.029	.024	.124	.206*	.194*	.299**	.117	.108	.194*
Y6	(Value) Geographical Coverage	245**	262**	228**	278**	252**	072	162	043	040	.019	093	.031	.035	.112	$.217^{*}$
Y7	(Performance) Market Share	.038	004	041	.014	.089	.145	.161	.180*	.142	.249**	.253**	.306**	.311***	.226**	.169 *
Y8	(Performance) Sales	077	093	088	.021	.039	.061	.115	.043	.028	.109	.156	.206*	.222**	.115	.101
Y9	(Performance) Intrinsinc Profitability	.048	.026	.034	.016	.142	.090	.126	.098	.029	.108	.174*	.162	.236**	.082	.077
Y10	(Performance) Relative Profit	.051	.007	002	011	.093	.147	$.178^{*}$.095	.089	.149	.124	.150	.245**	.182*	.149

Table 6.1 Continued

	Variables	X16	X17	X18	X19	X20	X21	X22	X23	X24	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
	Redeployment of																			
	Acquirer's Product																			
X16	Innovation Capabilities	1																		
	Redeployment of																			
	Acquirer's Know-how	**																		
X17	in Manufacturing	.789	1																	
	Redeployment of																			
	Acquirer's Marketing	<0.1**	< 7 0.**																	
X18	Expertise	.684	.670	1																
	Redeployment of																			
	Acquirer's Supplier	** **	<1.0**	5 00**																
X19	Relationship	.578	.612	.590	1															
	Redeployment of																			
	Acquirer's Distribution	5 00**	<0 7 **	**	< 2 +**															
X20	Expertise	.598	.627	.745	.634	I														
	Organizational network	2 0 c**	a + a**	- *	*	* - *														
X21	changes	.286	.243	.207	.196	.217	1													
1/22	Organizational	****	A (0**	••••*	170*		< 17 ^{**}													
X22	knowledge changes	.219	.268	.202	.172	.171	.647	1												
7/00	Retention of the	005	050	114	000	4=0*	204**	260**												
X23	Management team	.095	.059	.114	.082	.170	.306	.268	1											
7/04	Formal organizational	***	*		124	225**	40.4**	165**	(20)**											
X24	changes	.187	.171	.216	.134	.225	.424	.465	.629	1										
371	(Value) R&D	0.50**	050	075	0.40	076	252**	070**	151	007**										
Y1 V2	Capabilities	.255	.058	.075	.049	.070	.352	.278	.151	.237	1	1								
12 V2	(Value) Design Cycle	.302	.114	.183	.127	.18/	.345	.262	.145	.200	.0/0	1 500 ^{**}	1							
¥ 5	(Value) Product Cost	.203	.0/4	.143	.207	.146	.522	.100	.170	.199	.534	.599	1 620**	1						
14 V5	(Value) Input Prices	.200	.133	.198	.417	.275	.514	.202	.188	.237	.411	.323	.029	1 472**	1					
13	(Value) Product Line	.202	.104	.148	.140	.200	.575	.512	.127	.275	.038	.570	.327	.472	1					
Vć	(value) Geographical	206**	211**	221**	414**	425**	222**	202**	160	104*	206**	451**	221**	502**	450**	1				
10	(Danforman as) Mankat	.290	.511	.551	.414	.455	.333	.295	.100	.184	.280	.431	.321	.505	.439	1				
V7	(Performance) Market	222**	040	105*	116	116	420**	225**	175*	171*	421**	201**	200**	222**	460**	205**	1			
I / V0	(Danformence) Soloo	.252	.040	.195	.110	.110	.450	.333	.1/5	.1/1	.421	.301	.309	.232	.400	.293	1	1		
10	(Performance) Sales	.212	.075	.1/1	.198	.094	.512	.298	.072	.155	.299	.338	.241	.131	.414	.233	.//0	1		
VO	(Performance) Intrinsinc	10.4*	107	140	054	112	200**	255**	200*	207*	210**	1 01**	200*	069	221**	144	550**	651**	1	
19	(Derformence) Beletive	.194	.107	.149	.034	.112	.289	.235	.200	.207	.318	.282	.200	.008	.321	.144	.339	.034	1	
V10	Profit	111	060	068	020	101	368**	347**	235**	236**	361**	362**	168	208*	3/15**	244**	560**	564**	818**	1
110	110111	.111	.000	.000	.020	.101	.508		.235	.230	.504	.502	.108	.400	.545	.244	.500	.504	.010	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

N=136

number of factors is less than the number of measured variables (Brown 2006). In Table 6.2, the Bartlett's test of sphericity is depicted, which tests the hypothesis that the correlation matrix is an identity matrix, which signifies that all the diagonal terms are 1 and all off-diagonal terms are 0. If the test value is large and the significance level is small (< 0.05), the hypothesis that the variables are independent can be rejected. For the purpose of this analysis, the Bartlett's test of sphericity yielded a value of 3771.601 and an associated level of significance smaller than 0.001. Hence, the hypothesis that the correlation matrix is an identity matrix is rejected.

Kaiser-Meyer-Olkin Measure of Sam	.786	
	Approx. Chi-Square	3771.601
Bartlett's Test of Sphericity	df	561
	Sig.	.000

Table 6.2: KMO and Bartlett's Test

As it can be seen from Table 6.3, the communalities are displayed. The communality of each variable is the proportion of variance in each variable accounted for by the common factors. The chosen method of analysis as it was mentioned was principal components and therefore, it is feasible to compute as many factors as there are variables. Once all of factors have been incorporated in the solution, the sum all of the variance of the variables is accounted for by the common factors, or the communality of a variable is 1 for all the variables.

Variables	Initial	Extraction
X1: Target Divestiture of Manufacturing	1.000	.826
X2: Target Divestiture of Distribution	1.000	.879
X3: Target Divestiture of Sales	1.000	.842
X4: Target Divestiture of Administration	1.000	.771
X5: Target Divestiture of R&D	1.000	.846
X6: Acquirer Divestiture of Manufacturing	1.000	.907
X7: Acquirer Divestiture of Distribution	1.000	.741
X8: Acquirer Divestiture of Sales	1.000	.849
X9: Acquirer Divestiture of Administration	1.000	.722
X10: Acquirer Divestiture of R&D	1.000	.848
X11: Redeployment of Target's Product Innovation Capabilities	1.000	.801
X12: Redeployment of Target's Know-how in Manufacturing	1.000	.676
X13: Redeployment of Target's Marketing Expertise	1.000	.794
X14: Redeployment of Target's Supplier's Relationship	1.000	.795
X15: Redeployment of Target's Distribution Expertise	1.000	.759
X16: Redeployment of Acquirer's Product Innovation Capabilities	1.000	.850
X17: Redeployment of Acquirer's Know-how in Manufacturing	1.000	.795
X18: Redeployment of Acquirer's Marketing Expertise	1.000	.768
X19: Redeployment of Acquirer's Supplier Relationship	1.000	.673
X20: Redeployment of Acquirer's Distribution Expertise	1.000	.743
X21: Organizational Network Changes	1.000	.764
X22: Organizational Knowledge Changes	1.000	.641
X23: Retention of the Management Team	1.000	.662
X24: Formal Organizational Changes	1.000	.814
Y1: (Value) R&D Capabilities	1.000	.715
Y2: (Value) Design Cycle	1.000	.703
Y3: (Value) Product Cost	1.000	.688
Y4: (Value) Input Prices	1.000	.695
Y5: (Value) Product Line	1.000	.682
Y6: (Value) Geographical Coverage	1.000	.694
Y7: (Performance) Market Share	1.000	.726
Y8: (Performance) Sales	1.000	.778
Y9: (Performance) Intrinsic Profitability	1.000	.786
Y10:(Performance) Relative Profit	1.000	.732

Extraction Method: Principal Component Analysis.

Table 6.3: Communalities

The following table (Table 6.4) depicts the Total Variance Explained. It shows the estimated number of common factors, the eigenvalues which are related to these factors, the percentage of total variance accounted for by each factor, and finally the cumulative percentage of total variance accounted for by the factors. In order to make a decision on the number of the factors to extract to represent the data, a useful way is to look at the eigenvalues associated with these factors. By employing the benchmark of preserving only factors with eigenvalues of 1 or greater, the first eight factors were retained for rotation. These eight factors account for 22.4%, 19.47%, 8.85%, 6.78%, 6.49%, 4.85%, 4.54% and 2.95% of the total variance, respectively. That amounts to 76.3% of the total

variance is attributable to these eight factors. The remaining twenty-six factors together account for only approximately 23.7% of the variance. Therefore, a model with eight factors may be adequate to represent the data.

Component	Initial Eigenvalues			Extrac	tion Sums o	f Squared	Rotation Sums of Squared				
					Loadings	6		Loadings	8		
	Total	% of	Cumulative	Total	% of	Cumulative	Total	% of	Cumulative		
	7 (17	Variance	%	7 (17	Variance	%	1.2(0)	Variance	%		
1	/.61/	22.403	22.403	/.61/	22.403	22.403	4.360	12.825	12.825		
$\frac{2}{3}$	3.009	8.850	50.730	3.009	8.850	50.730	3.840	12.208	36.386		
4	2.308	6.789	57.519	2.308	6.789	57.519	3.643	10.714	47.100		
5	2.209	6.498	64.017	2.209	6.498	64.017	3.315	9.751	56.852		
6	1.651	4.857	68.874	1.651	4.857	68.874	3.305	9.722	66.573		
7	1.546	4.546	73.420	1.546	4.546	73.420	2.116	6.223	72.797		
8	1.003	2.951	/6.3/1	1.003	2.951	/6.3/1	1.215	3.574	/6.3/1		
9	.900	2.824	/9.193								
10	./83	2.303	81.498								
11	.670	1.972	83.470								
12	.614	1.806	85.276								
13	.531	1.561	86.837								
14	.465	1.367	88.204								
15	.416	1.224	89.427								
16	.384	1.130	90.557								
17	.369	1.084	91.641								
18	.336	.987	92.629								
19	.323	.949	93.578								
20	.278	.818	94.396								
21	.249	.733	95.129								
22	.216	.634	95.763								
23	.201	.592	96.355								
24	.191	.562	96.917								
25	.163	.481	97.398								
26	.149	.439	97.837								
27	.135	.398	98.235								
28	.120	.354	98.589								
29	.111	.326	98.915								
30	.103	.302	99.217								
31	.086	.254	99.471								
32	.065	.191	99.662								
33	.062	.182	99.844								
34	.053	.156	100.000								

Extraction Method: Principal Component Analysis.

Table 6.4: Total Variance Explained
The scree test, as mentioned in Chapter 4, is performed by plotting the latent roots against the number of factors in their order of extraction. The shape of that resulting curve is used to evaluate the cut-off point. Figure 6.1 plots all the 34 factors. Starting with the first component, the plot slopes steeply downward and after the 8th component, it slowly becomes a horizontal line. That cut-off point where the plot changes its slope, in this case the 8th component, indicates the maximum number of factors to be extracted. Thus the scree plot indicates that an eight factor model should be sufficient to represent the data.



Figure 6.1: Scree Test for Component Analysis

The Component Matrix shows the unrotated component analysis factor matrix, and reveals the correlations that associate the variables to the eight extracted factors. The Component Matrix is presented in Table 6.5. Loadings, less than .390 were excluded to provide an uncluttered table. These coefficients, are named factor loadings, and reveal how closely the variables are related to each factor. Nevertheless, because the factors were extracted on the basis of the proportion of total variance explained, these factors are "unrotated" and as a result significant cross-loadings have occurred. Taking for

example, the variable Product Cost (Y3) it has loaded highly on Factor 1, Factor 2 and Factor 5. Also, the variable Relative Profit (Y10) has loaded highly on Factor 1, Factor 2 and Factor 5. At the same time the variable Acquirer Divestiture of Sales (X8) has loaded highly on Factor 1 and Factor 3. 24 out of the 34 have cross-loadings and make the interpretation of the factors difficult and theoretically less meaningful. Therefore, rotation may improve the theoretically meaningful relationships among the variables.

	Component							
1		2	3	4	5	6	7	8
X10: Acquirer Divestiture of R&D .7	'08		.410					
X1: Target Divestiture of Manufacturing .6	579	515						
X6: Acquirer Divestiture of Manufacturing .6	65		.483					
X8: Acquirer Divestiture of Sales .64	644		.473					
X5: Target Divestiture of R&D .64	644	459						
X2: Target Divestiture of Distribution .64	43	492						
X11: Redeployment of Target's Product Innovation	13							
Capabilities	40							
X7: Acquirer Divestiture of Distribution .6	514							
X3: Target Divestiture of Sales .6	513	498						
X9: Acquirer Divestiture of Administration .5	92							
X12: Redeployment of Target's Know-how in	81							
Manufacturing	01							
X13: Redeployment of Target's Marketing Expertise .5	78			.491				
Y1: (Value) R&D Capabilities .5	74							
X4: Target Divestiture of Administration .5	45	464						
Y7: (Performance) Market Share .4	-85	.472						
Y3: (Value) Product Cost .4	-70	.406			.422			
Y6: (Value) Geographical Coverage		.659						
X20: Redeployment of Acquirer's Distribution Expertise		.636	.488					
X18: Redeployment of Acquirer's Marketing Expertise		.630	.528					
X19: Redeployment of Acquirer's Supplier Relationship		.605	.425					
X16: Redeployment of Acquirer's Product Innovation		599	535					
Capabilities		.000	.000					
Y4: (Value) Input Prices		.563						
X22: Organisational knowledge changes		.517						
Y2: (Value) Design Cycle .4	-82	.513						
Y5: (Value) Product Line .4	48	.498						
X21: Organisational network changes .4	-21	.493						
Y8: (Performance) Sales		.470						
X17: Redeployment of Acquirer's Know-how in		552	616					
Manufacturing		.001	.010					
X14: Redeployment of Target's Supplier's Relationship .5	29			.555				
X15: Redeployment of Target's Distribution Expertise .4	-34			.518				
Y9: (Performance) Intrinsic Profitability				443	413			
Y10:(Performance) Relative Profit .4	15	.412			436			
X24: Formal organisational changes		.470				.419	524	
X23: Retention of the Management team							493	

Extraction Method: Principal Component Analysis.

a. 8 components extracted.

Table 6.5: Component Matrix all Variables

In Chapter 4 of the thesis, it was mentioned that the orthogonal rotation technique was appropriate and it was decided that amongst the existing approaches (Quartimax, Varimax, and Equimax), which are available within the orthogonal technique, the Varimax approach is the most preferable since it produces a clearer separation of the factors (Kaiser, 1970; Kaiser, 1974). Examination of the factor loadings is presented in the Varimax Rotated Component Matrix, in Table 6.6, which shows that 32 of the 34 variables loaded highly on 7 factors.

As it is clear from Table 6.6 there exist some cross-loadings that require some further actions to be taken. According to Taylor (2006) and Hair et al (2010) there are several ways to cope with cross-loadings:

- 1. The researcher can ignore those problematic variables and start interpreting the results if the purpose of the analysis is just data reduction.
- 2. The researcher can employ a different rotation method (oblique instead of orthogonal)
- 3. If there are many significant cross-loadings, there is a probability of further commonality among the cross-loaded variables and the factors. The solution to this problem is for the researcher to "rerun" the factor analysis stipulating a smaller number of factors to be extracted
- 4. The researcher can investigate the "wording" of those cross-loaded variables and based on their meaning can assign them to the factors make most conceptual and logical sense.
- 5. The researcher can employ a different factor model (common factor instead of principal component) in order to find out if changing the type of variance has any effect on the model.

6. The researcher can delete all the cross-loaded variables. The interpretation therefore of the new resulting "clean" factors will make their interpretation much easier.

				Comp	onent			
	1	2	3	4	5	6	7	8
X2: Target Divestiture of Distribution	.879							
X3: Target Divestiture of Sales	.863							
X5: Target Divestiture of R&D	.858							
X4: Target Divestiture of Administration	.847							
X1: Target Divestiture of Manufacturing	.786							
X6: Acquirer Divestiture of Manufacturing		.913						
X8: Acquirer Divestiture of Sales		.885						
X10: Acquirer Divestiture of R&D		.868						
X9: Acquirer Divestiture of Administration		.820						
X7: Acquirer Divestiture of Distribution		.791						
X17: Redeployment of Acquirer's Know-how in			868					
Manufacturing			.808					
X16: Redeployment of Acquirer's Product Innovation			858					
Capabilities			.858					
X18: Redeployment of Acquirer's Marketing Expertise			.844					
X20: Redeployment of Acquirer's Distribution Expertise			.805					
X19: Redeployment of Acquirer's Supplier Relationship			.760					
Y3: (Value) Product Cost				.775				
Y2: (Value) Design Cycle				.764				
Y4: (Value) Input Prices				.757				
Y5: (Value) Product Line				.743				
Y1: (Value) R&D Capabilities				.726				
Y6: (Value) Geographical Coverage				.536				.461
X13: Redeployment of Target's Marketing Expertise					.821			
X14: Redeployment of Target's Supplier's Relationship					.815			
X15: Redeployment of Target's Distribution Expertise					.791			
X12: Redeployment of Target's Know-how in					717			
Manufacturing					./1/			
X11: Redeployment of Target's Product Innovation					600			
Capabilities					.000			
Y9: (Performance) Intrinsic Profitability						.864		
Y8: (Performance) Sales						.846		
Y10:(Performance) Relative Profit						.802		
Y7: (Performance) Market Share						.764		
X24: Formal organisational changes							.858	
X23: Retention of the Management team							.781	
X22: Organisational knowledge changes							.535	.449
X21: Organisational network changes							.453	.543

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table 6.6: Rotated Component Matrix

Using Taylor's (2006) suggestion, it was decided to "rerun" with a smaller number of factors. The new analysis was performed with the restriction of seven factors because that corresponds also to the number of the hypothesised latent variables of the thesis model. The results are displayed in Table 6.7. It is clear that with those seven factor

loadings, there no cross-loadings. Thus, the primary objective with using the principal components analysis was to obtain the minimum number of factors and understand whether these perceptions can be "grouped" into factors that explain the underlying perceptions of the theory. That was achieved as all the groups of variables (factors) correspond to the underlying assumptions of the model.

	Component						
	1	2	3	4	5	6	7
X2: Target Divestiture of Distribution	.874						
X5: Target Divestiture of R&D	.861						
X3: Target Divestiture of Sales	.860						
X4: Target Divestiture of Administration	.845						
X1: Target Divestiture of Manufacturing	.785						
X6: Acquirer Divestiture of Manufacturing		.913					
X8: Acquirer Divestiture of Sales		.884					
X10: Acquirer Divestiture of R&D		.866					
X9: Acquirer Divestiture of Administration		.819					
X7: Acquirer Divestiture of Distribution		.790					
X17: Redeployment of Acquirer's Know-how in			862				
Manufacturing			.005				
X18: Redeployment of Acquirer's Marketing Expertise			.841				
X16: Redeployment of Acquirer's Product Innovation			.839				
Capabilities							
X20: Redeployment of Acquirer's Distribution Expertise			.814				
X19: Redeployment of Acquirer's Supplier Relationship			.766				
Y4: (Value) Input Prices				.770			
Y3: (Value) Product Cost				.758			
Y2: (Value) Design Cycle				.752			
Y5: (Value) Product Line				.745			
Y1: (Value) R&D Capabilities				.703			
Y6: (Value) Geographical Coverage				.588			
X13: Redeployment of Target's Marketing Expertise					.830		
X14: Redeployment of Target's Supplier's Relationship					.810		
X15: Redeployment of Target's Distribution Expertise					.781		
X12: Redeployment of Target's Know-how in					722		
Manufacturing					.755		
X11: Redeployment of Target's Product Innovation					711		
Capabilities					./11		
Y9: (Performance) Intrinsic Profitability						.859	
Y8: (Performance) Sales						.846	
Y10:(Performance) Relative Profit						.794	
Y7: (Performance) Market Share						.760	
X24: Formal Organizational Changes							.839
X23: Retention of the Management Team							.759
X22: Organizational Knowledge Changes							.638
X21: Organizational Network Changes							.581
Extraction Mathed: Principal Component Analysis							

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table 6.7: Rotated Component Matrix Seven Factors

6.3. Factors

That group of variables depicted on Table 6.7 corresponds to seven factors which in turn represent the six hypothesised latent variables and the one control variable of the thesis model. Namely those are: Target Asset Divestiture (Factor 1), Acquirer Asset Divestiture (Factor 2), Acquirer's Recourse Redeployment (Factor 3), Value (Factor 4), Target's Resource Redeployment (Factor 5), Post-acquisition Performance (Factor 6) and finally Organisational Changes (Factor 7).

6.3.1. Acquirer and Target Asset Divestiture Factor

In Chapter 3 asset divestiture was presented as the partial or complete sale or disposal of physical and organizational assets, shut down of facilities and reduction of work forces of target and acquirer businesses. Through asset divestiture, that is, by selling excess physical assets, laying off employees, and shutting down excess facilities, a firm may be able to sell and produce goods more efficiently. Therefore, Factor 1 and Factor 2 represent the divestiture of asset to the target and to the acquirer respectively. Asset divestiture is a reasonable end result of a procedure where companies use acquisitions as means of reshaping their resources. However theories in management and finance are broadly unanimous in predicting that divestiture will lead to positive results. Thus asset divestiture of the target and the acquirer involves around distribution, R&D, sales, administration and manufacturing.

6.3.2. Acquirer and Target Resource Redeployment Factor

As it was presented in Chapter 3 ways of enhancing revenues involve (a) increased *market coverage* and (b) enhanced *innovation capability*. The exploitation of these revenue-based synergies (increased market coverage and innovation capability) is usually realized through resource redeployment. The next set of factors represents the redeployment of the acquirer resources to the target (Factor 3) and the redeployment of target resources to the acquirer (Factor 5). Acquisitions can create value and enhance revenues by redeploying resources from the target to the acquirer and/or, from the acquirer to the target, respectively. Thus resource redeployment to the target and to the

acquirer involves around know-how in manufacturing, marketing expertise product innovation capabilities, distribution expertise and supplier relationship.

6.3.3. Value as a mediating Factor

Value is considered as the mediating variable of the study. Value (Factor 4) consists of six variables that in turn form the three latent variables of the model, *cost savings*, *market coverage* and *innovation capability*. Cost savings consists of two variables, *input prices* and *product costs*. Moreover, market coverage comprises two variables, *broadening of product* line and *geographical coverage*. Also, innovation capability is measured by *R&D capabilities* and *design cycle*. In Chapter 2 it was argued that cost savings can enhance post-acquisition performance through asset divestiture, economies of scale and scope. Additionally, it was discussed that market coverage can be increased in acquisitions through the geographic and product line expansion. Likewise, innovation capability can result into premium prices and increased sales volumes and thus to higher profits.

6.3.4. Post-acquisition Performance Factor

It was argued in Chapter 2 that neither accounting nor market measures can be used as valid measures of post-acquisition performance and instead subjective measures can be used. Therefore, in this study post-acquisition performance (Factor 6) is captured by self-reported measures of changes in four variables, intrinsic profitability, sales, profitability relative to industry average (relative profit) and market share.

6.3.5. Organisational Changes Factor

One of the elements of having an impact on post-acquisition performance as it was argued in Chapter 3, are organisational changes (Factor 7). Organisational changes that take place post-acquisition, both formal and informal, can take many forms and can affect managers' attitudes, managerial style and decision making. This factor is measured with four variables namely formal organisational changes, retention of the management team, organisational knowledge changes and organisational network changes.

6.4. Reliability

The resulting seven factors of the analysis correspond to the hypothesised latent variables of the theory. Those variables are summarised in Table 6.9. An internal consistency test was employed in order to test the extent the variables measure the same construct. It is presented in Table 6.9 along with the other factors and items. An internally consistent test enhances the possibilities of the factors reliability. The rationale behind reliability and more specific internal consistency is that the individual items or indicators of the scale ought to measure the same construct and consequently be highly intercorrelated (Churchill 1979, Brown 2006). One measure of internal consistency is the reliability coefficient which assesses the consistency of the entire scale with the Cronbach's alpha (Peter 1979). If Cronbach's Alpha is above or close to the 0.7 threshold it is suggested that all of the items are reliable and the entire test is internally consistent (Cronbach 1951, Hair et al 2010). As it can be seen, from Table 6.8 Cronbach's a ranges from 0.762 to 0.946, something that indicates a high overall consistency among the seven items. Therefore, based in this criterion, all of the items can be retained.

6.4.1. Construct Validity

Construct validity is the extent to which a set of measured items reflect the theoretical latent construct they were designed to measure. Therefore, tests were employed on the measurement model in order to check for construct validity, item reliability, internal consistency and discriminant validity. The results of these tests are reported in Table 6.8. Construct validity, is made up of four components, namely: face validity, convergent validity, discriminant validity and nomological validity.

Latent Variables	Number of items	Average Variance Extracted	Construct Reliability	Internal Consistency Cronbach's
				a
Acquirer Asset Divestiture	5	0.75	0.93	0.931
Target Asset Divestiture	5	0.77	0.94	0.946
Resource Redeployment to Acquirer	5	0.72	0.92	0.870
Resource Redeployment to Target	5	0.66	0.90	0.904
Organisational Change	4	0.56	0.83	0.762
Cost Savings (Value)	2	0.65	0.80	0.772
Market Coverage (Value)	2	0.72	0.75	0.703
Innovation Capability (Value)	2	0.65	0.79	0.806
Post-Acquisition Performance	4	0.71	0.91	0.881

 Table 6.8: Latent Variables

Face validity is defined as the extent to which the content of the items is consistent with the construct definition. As it is solely based on the researcher's judgement, face validity holds true as the constructs follow the hypothesised model.

Convergent validity is the extent to which indicators of a specific construct "converge" or share a high proportion of variance in common. In order to assess convergent validity construct loadings and average variance extracted (AVE) are examined². AVE should be 0.5 or greater to indicate adequate convergent validity. In addition, AVE estimates should be greater than the square of the correlation between that factor and other factors to provide evidence of discriminate validity. Also construct reliability (CR) should be 0.7 or higher to indicate adequate convergence or internal consistency³. As it is clear from table 6.9, all of the items are above 0.5 for AVE, all the items are above 0.7

² Average variance extracted is
$$AVE = \frac{\sum_{i=1}^{n} \lambda_i^2}{n}$$

³ Construct reliability is $CR = \frac{(\sum_{i=1}^{n} \lambda_i)^2}{(\sum_{i=1}^{n} \lambda_i)^2 + \sum_{i=1}^{n} \delta_i)}$
176

threshold for CR therefore it is safe to declare that construct validity was achieved and can proceed with the analysis of the measurement model.

Group of	Hypothesised Latent	Factors	Number	Internal
Variables Variables			of items	Consistency Cronbach's
				а
X1 to X5	Target Asset Divestiture	Factor 1	5	0.931
X6 to X10	Acquirer Asset Divestiture	Factor 2	5	0.946
X17 to X20	Acquirer's Recourse Redeployment	Factor 3	5	0.870
X11 to X15	Target's Resource Redeployment	Factor 5	5	0.904
X21 to X24	Organisational Changes	Factor 7	4	0.762
Y1 to Y6	Value	Factor 4	6	0.807
Y7 to Y10	Post-acquisition Performance	Factor 6	4	0.881
		4		

 Table 6.9: Factors

6.5. Conclusion

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In this chapter factor analysis was employed to derive meaningful factors from the data obtained from the questionnaires. Therefore, using factors analysis, the perceptions of post-acquisition performance on 34 attributes were examined in order to understand whether these perceptions can be "grouped" and whether they can be reduced to a smaller number. Factor analysis was successful and resulted in a seven factor model. This result corresponds to the hypothesised variables of the thesis model.

Therefore it is possible to continue the analysis of the data by means of structural equation modelling (SEM). Chapter 7 using SEM tries to examine dependence relationships between the exogenous (Post-acquisition performance, Value) and endogenous variables (Target and Acquirer Asset Divestiture, Target and Acquirer Resource Redeployment) simultaneously.

7. Structural Equation Modelling

7.1. Introduction

The previous chapter presented the analysis of the data using correlation and factor analysis. This chapter comprises the structural equation model and its application on the thesis. Specifically, this chapter examines the underlying relationships among the constructs and the variables using structural equation modelling. It is the best multivariate procedure for testing both the construct validity and theoretical relationships among a set of concepts represented by multiple measured variables. *Section 7.2* presents the structural equation modelling as a statistical methodology. In section 7.3 the thesis model is described and defined. Moreover in section 7.4 the measurement model results are evaluated and depicted (Figure 7.1) and in table 7.2 all the latent variables and items are presented. In section 7.5 the structural model of the thesis is reviewed. Figure 7-2 along with Tables 7-6 to 7-9 report the results from carrying out a structural equation modelling analysis. Finally, the chapter concludes with a review of the structural model results.

7.2. Structural Equation Modelling (SEM)

Structural equation modelling (SEM) is a family of statistical models that seek to explain the relationships among multiple variables (Hair *et al.*, 2010). According to Byrne (2010) SEM is a statistical methodology that uses a confirmatory approach to the analysis of a structural theory bearing on some phenomenon. SEM examines the structure of interrelationships expressed in a series of equations, analogous to a series of multiple regression equations. SEM carries two important properties. First, causal processes studied are represented by a series of structural equations. Second, theory can be conceptualised clearer because these structural relations can be modelled pictorially.

The structural equations within SEM depict all of the relationships among constructs (the dependent and independent variables) involved in the analysis. Constructs are unobservable or latent factors represented by multiple variables (similar to variables representing a factor in factor analysis). SEM can be thought of as a unique combination of both types of multivariate techniques (interdependence and dependence), because its foundation lies in two widely accepted multivariate techniques: factor analysis and multiple regression analysis.

Byrne (2010) argues that there exist four aspects that set SEM apart from other multivariate procedures. First, it uses a confirmatory rather than an exploratory approach to the data analysis. Second, SEM provides explicit estimates of error variance parameters, whereas traditional multivariate procedures are incapable of either assessing or correcting for measurement error. As a result, the statistical estimation process is improved, because the structural paths between latent variables are fairly free of the unreliabilities of their measurement indicators (Ho 2006). Third, SEM incorporates both unobserved and observed variables. Multiple regression is limited to the analysis of those variables that can only be directly observed or measured, whereas SEM has the ability to include unobserved (latent) variables in the analysis. Fourth, there are no alternative methods providing a straightforward platform to model multivariate relations, or to estimate point and/or interval indirect effects.

Exogenous constructs are the latent, multi-item equivalent of independent variables. As such they use a variate of measures to represent the construct, which acts as an independent variable in the model. They are determined by factors outside the model, thus the term independent. Endogenous constructs are the latent, multi-item equivalent to dependent variables. These constructs are theoretically determined by factors within the model.

As it was mentioned earlier, (Section 4.6.7 p.124) the sample size for SEM includes five considerations: 1) multivariate normality of the data. 2) Estimation technique. The most common SEM estimation procedure is maximum likelihood estimation (MLE). 3) Model complexity. The more complex a model can be, there is a need for larger samples. 4) Amount of missing data. Finally, 5) average error variance among the reflective indicators. Models containing multiple constructs with communalities less than 0.5 also require larger sizes for convergence and model stability (Enders and Bandalos, 2001).

The most common SEM estimation procedure is maximum likelihood estimation (MLE). MLE can provide valid results with sample sizes as small as 50 (Hair *et al.*, 2010). In addition, Boomsma (1982) suggested using a ratio r = p/k of indicators to latent variables. In this thesis, the number of indicators is 30 and the number of latent variable is 8, thus producing a ratio r of 3.75 (30/8=3). Furthermore, Boomsma's (1982) simulations suggested that a ratio r of indicators to latent variables of r = 4 would require a sample size of 100. In Addition Marsh *et al.*, (1998) ran 35,000 Monte Carlo simulations on LISREL CFA analysis, yielding data that suggested that: r = 3 would require a sample size of at 200.

7.3. Defining the Model

A model is a representation of the theory. Theory can be thought of as a systematic set of relationships providing a consistent and comprehensive explanation of phenomena. SEM in its most general form consists of two parts: the measurement model and the structural equation model. The measurement model specifies the rules of how the latent variables are measured in terms of the observed variables and describes the measurement properties of the observed variables. SEM is a flexible, comprehensive model that specifies the pattern relationships among independent and dependent variables, either observed or latent. It incorporates the strengths of multiple regression analysis, factor analysis and multivariate ANOVA (MANOVA) in a single model that can be evaluated statistically.

The use of SEM holds a major advantage compared to other multivariate methods. That is the number of the indicator variables. Using multiple indicators in SEM helps to keep the analysis of the model uncontaminated by errors of measurement in the indicators (Ho 2006). Bentler (1980) pointed out that too many indicators can make the model to fit the data really difficult.

Also, some assumptions should be noted for the model. First, observations are independent from each other. Second, there is a random sampling of respondents. Third, there exists linearity between exogenous and endogenous variables. Finally, the observed variables are normally distributed. The absence of multivariate normality can cause problems as the chi-square statistic can become inflated. This, in turn, can lead to and an upward bias in critical values and affect the process of determination of coefficient significance (Wang *et al.*, 1996).

The thesis' AMOS estimation model consists of two parts, a) an inner structural model that captures the structural relationship between the endogenous and exogenous latent variables and b) an outer measurement model that captures the manifestation of constructs or latent variables in terms of observable variables.

In the first part (a) the inner structural model specifies the relations among the constructs (latent variables) and can be written as:

$$\eta = \beta \eta + \Gamma \xi + \zeta$$

Where:

- η is a (m×1) vector of latent endogenous variables
- ξ is a (n×1) vector of exogenous variables
- β is (m×m) matrix of endogenous variable coefficients
- ζ is a (m×1) vector of residuals.

Also, in order to allow ξ to be correlated the variance-covariance matrix of latent exogenous variables (ϕ) has to be specified. Thus, the outer measurement model can be written as:

$$y = \Lambda_{y} \eta + \varepsilon$$
$$x = \Lambda_{x} \xi + \delta$$

Where:

- y is a (p×1) vector of endogenous indicators
- x is a (q×1) vector of exogenous indicators
- Λ_{y} is a (p×m) matrix of regression coefficients of ξ on x
- ε is a (p×1) vector of measurement error for the indicators of the endogenous variables.

• δ is a (q×1) vector of measurement error for the indicators of the exogenous variables.

Table 7.1 presents the hypothesised latent endogenous and exogenous variables of the model

Latent Endogenous Variables (η)	•	Value	(Cost	Savings,	Market		
		Coverage	e, Innova	tion Capabili	ity) ⁴		
	٠	Post-Acquisition Performance					
Latent Exogenous Variables (ξ)	٠	Asset Di	vestiture				
	٠	Resource	e Redeplo	oyment ⁵			
Table 7.1: Latent Endogenous and Exogenous Variables							

Finally so as to provide a metric, one indicator of each latent construct, it was specified as having a factor loading equal to one (Byrne, 2010). In the next sections the SEM model used is presented.

7.3.1. Model Fit

In order to assess the validity of the measurement model and the structural model, one has to look at the Goodness of Fit (GOF) indices. A number of fit indices have been developed along with unique approaches to the model fitting process (Byrne, 2010). Once a specified model is estimated, model fit compares the theory to reality by assessing the similarity of the estimated covariance matrix (theory) to reality (the observed covariance matrix). A number of goodness-of-fit measures are available to assess the overall fit of the hypothesised model. The extent to which the actual or

⁴ Cost reduction, market coverage and innovation capability are the mediating variables of the model.

⁵ Asset divestiture, and resource redeployment are the post-acquisition actions

observed covariance input matrix corresponds with the predicted from the proposed model is measured by the goodness-of-fit (Ho, 2006)

According to (Jöreskog and Sörbom, 1993) a measure of overall fit is the likelihood ratio chi-square (χ^2) statistic, the only statistically based measure of goodness-of-fit available in SEM. Using the chi-square statistic implies that the researcher wishes to reject the null hypothesis in order to support the alternative. In that aspect, the higher the value of the chi-square statistic the better the fit of the model under investigation. Nevertheless, in SEM insignificant differences are sought by the researcher between the actual and the predicted matrices. Therefore, the researcher seeks not to reject the null hypothesis and thus the smaller the chi-square value the better the overall fit of the model. However, the chi-square statistic is very sensitive to departures from multivariate normality of the observed variables and increases as a direct function of sample size (Ho, 2006). Nonetheless, the sensitivity of the Likelihood Ratio Test to sample size and its basis on the central χ^2 distribution, that assumes that the model fits perfectly in the population, led to problems of fit that are now widely known (Byrne, 2010). Therefore, researchers have addressed the χ^2 limitations by developing goodness-of-fit measures that take a more pragmatic approach to the evaluation process.

The normal chi-square (CMIN/DF in AMOS) is the chi-square fir index divided by the degrees of freedom. This index is considered as an attempt to make the model chi-square less dependent on sample size. Different researchers have recommended using ratios as low as 2 or as high as 5 to indicate a reasonable fit (Marsh and Hocevar; 1985, Byrne, 2010).

The root mean square error of approximation (RMSEA) is the second measure to be included. The RMSEA is measure of discrepancy per degree of freedom and poses the question "how well would the model, with unknown but optimally chosen values, fit the population covariance matrix if it were available" (Browne and Cudeck, 1993, pp. 137–138). Values ranging from 0.05 to 0.08 are deemed acceptable, values ranging from 0.08 to 0.10 indicate mediocre fit, and those greater than 0.10 indicate poor fit (Browne and Cudeck, 1993; MacCallum, *et al.*, 1996).

The baseline model is usually referred to as the null or independence model and the observed variables are assumed to be uncorrelated with each other. Also, because the independence model is constrained, it would probably provide a poor fit to any set of data. A number of incremental fit measures have been proposed, such as Tucker-Lewis Index (TLI), Normed Fit Index (NFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), and Comparative Fit Index (CFI). However, evidence suggests that the NFI shows a tendency to underestimate fit in small sample sizes (Bentler, 1990) and that the RFI represents a derivative of the NFI (Bollen 1986). Therefore it is suggested that CFI and IFI should be used in order to address the issues of parsimony and sample size that are known to affect the NFI and RFI. All of these indices even though their underlying assumptions may be different to some degree, the all signify comparisons between the proposed model and the null or independent model. They range from a fit that is the same as the null model (0) to a perfect fit (1). Thus in the examination of the values as being indicative for a model fit, CFI and IFI are considered. Thompson (2000: 270-271) recommends the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) as being the most useful when assessing the model fit

Finally, is the root mean square residual (RMR). RMR is the mean absolute of the covariance residuals, which reflect the difference between observed and modelestimated covariances. However, because the upper bound of RMR is not 1.0 but rather depends on the scale of the measured variables, an unstandardised RMR in difficult to interpret and the use of SRMR is recommended (Garson, 2012). SRMR is a standardised version of RMR. SRMR is the average difference between the predicted and observed covariances in the model, based on standardised residuals. Standardised residuals, in turn, are fitted residuals divided by the standard error of residuals. SRMR assumes a large enough sample to assume stability of the standard error. The smaller the SRMR the better the model fit. If SRMR equals 0 it indicates a perfect fit. A value less than .05 is widely considered good fit and below .08 as an adequate fit.

Marsh and his colleagues (Marsh, *et al.*, 2004; McDonald and Marsh, 1990) warned about relying on traditional cut-off values as "rules of thumb" to assess model fit across different research conditions and sample sizes. Their warning coincide with Hu and

Bentler's (1998; 1999) conclusion that "it is difficult to designate a specific cut-off value for each fit index because it does not work equally well with various types of fit indices, sample sizes, estimators, or distributions" (page 449). Moreover, they argued that high incremental fit indices (> 0.90) are not a sufficient basis to establish the validity of interpretations based on the theory underlying the posited model. Rather, as pointed out by Hu and Bentler (1998), "consideration of other aspects such as adequacy and interpretability of parameter estimates, model complexity, and many other issues remains critical in deciding on the validity of a model" (page 450). In their recent comment on the dangers of setting cut-off values for fit indices, Marsh *et al.*, (2004) recommended that interpretations of model-fit "should ultimately have to be evaluated in relation to substantive and theoretical issues that are likely to be idiosyncratic to a particular study" (page 340).

Therefore the measures that were considered as goodness-of-fit for the purpose of this thesis in order to assess the validity of the model are the CMIN/DF CFI, IFI, RMSEA and SRMR.

7.4. The Measurement Model

Before forming the measurement model, tests for significance and model fit had to be performed to all of the latent variables with each one of their corresponding items. CFA was used for each construct at a time to ensure acceptable parameter estimate-to-observation ratios (Bentler and Chou, 1987; Vorhies and Morgan, 2005). This procedure is in line with the suggestions of Joreskog (1993). Items were modified or deleted to achieve an accepted level of model fit. In order to attain an adequate unidimentionality with satisfactory fit indices, items were deleted. The resulting latent variables are presented in the following Table 7.2. The variables that had to be deleted in order to achieve an acceptable model fit and unidimensionality were 4 in total: acquirer divestiture of R&D, target divestiture of R&D, acquirer product innovation and target product innovation.

Using the remaining measurement variables and by using the two step approach, a measurement model was estimated before examining the structural model relationships

and the path model, in order to verify that the 26 measurement variables reflect the 8 unobserved constructs (Ho, 2006; Hair *et al.*, 2010; Byrne, 2009; Anderson and Gebring, 1988). One of the biggest advantages of confirmatory factor analysis in SEM is its ability to quantitatively asses the construct validity of a proposed measurement theory.

Before evaluating the fit of the path model presented in Figure 7.3, it is necessary to define a measurement model to verify that the 26 measurement variables that reflect the eight unobserved constructs that have been defined by the theory in the previous chapters. Those are, acquirer and target divestiture, acquirer and target resource redeployment, value (cost savings, innovation capability and market coverage) and post-acquisition performance. The overall fit of a measurement model is determined by a confirmatory factor analysis (CFA). The fit of this model is extremely important in that all possible latent-variable structural models are nested within it. Obtaining a poor fit at this stage indicates a need for further refinement of the measurement model and precludes moving on to investigate latent-variable structural models (Anderson & Gerbing, 1988).

Latent Variables	Items
Acquisition Performance	 Market Share Sales Intrinsic Profitability Relative Profitability
Cost Savings	Product CostsInput Prices
Market Coverage	Extension of Product LinesGeographical Coverage
Innovation Capability	Product Innovation CapabilitiesDevelopment of design cycle
Acquirer Asset Divestiture	 Manufacturing Logistics Sales Network Administrative Services

Latent Variables	Items
Target Asset Divestiture	ManufacturingLogistics
	Sales NetworkAdministrative Services
Acquirer Resource Redeployment	 Manufacturing Know-How Marketing Resources Supplier Relationships Distribution Expertise
Target Resource Redeployment	 Manufacturing Know-How Marketing Resources Supplier Relationships Distribution Expertise

Table 7.2: Latent Variables and Items

At this stage of the analysis, CFA is carried out to determine the degree of model fit and the adequacy of the factor loadings, the standardized residuals and explained variances for the measurement variables. Figure 7.1 presents the measurement model where all factor loadings are freed; items are allowed to load on only one construct; and latent constructs are allowed to correlate.

The baseline comparisons fit indices CMIN/DF CFI, IFI, RMSEA and SRMR are all at acceptable levels (see Table 7.3). Given the range of the computed baseline comparisons fit indices, the remaining possible improvement in fit for the hypothesized model appears small as to be of little practical significance.

CMIN/DF	CFI	IFI	RMSEA	SRMR
1.909	0.906	0.908	0.82	0.695

 Table 7.3: Measurement Model Fit



Figure 7.1: Measurement Model Diagram

All of the variables of the model are covariated and are significant so as to progress further to the structural model. As can be seen from Table II.1 (Appendix II) the regression weights are all significant at the p<0.001 level. Thus it is clear that all the hypothesised constructs and variables of the model are eligible for further inspection and testing the structural model. Also, the unstandardized regression weights are all significant test (> ± 1.96 , p < .001) (see Table II.2, Appendix II). The standardized regression weights range from 0.597 to 0.988 (see Table II.2, Appendix II). These values indicate that the 26 measurement variables are significantly represented by

their respective latent constructs. Based on these tests, it can be concluded that the measurement model represents an "adequate fit" to the data.

7.4.1. Construct Validity

Construct validity is the extent to which a set of measured items reflect the theoretical latent construct they were designed to measure. Therefore, tests were employed on the measurement model in order to check for construct validity, item reliability, internal consistency and discriminant validity. The results of these tests are reported in Table II.3, Appendix II. **Convergent validity** is the extent to which indicators of a specific construct "converge" or share a high proportion of variance in common.

In order to assess convergent validity construct loadings and **average variance extracted** (**AVE**) are examined. AVE should be 0.5 or greater to indicate adequate convergent validity. In addition, AVE estimates should be greater than the square of the correlation between that factor and other factors to provide evidence of discriminate validity. In addition, construct reliability (CR) should be 0.7 or higher to indicate adequate convergence or internal consistency. As it is clear from Table II.3, all of the items are above 0.5 for AVE and above the 0.7 threshold for construct reliability (CR). Therefore it is safe to state that construct validity was achieved and can proceed with the analysis of the measurement model.

Also, the maximum squared variance (MSV) and the average shared squared variance (ASV) should not exceed the AVE. This is verified in Table II.3. Finally, the square root of the AVE should not be less than any of the correlation with another factor. Looking at Table II.4 (Appendix II) it is clear that no value for the square root of the AVE surpasses that.

In summary, it is clear from both Table II.3 and Table II.4 that all items satisfy all the thresholds and therefore it is safe to declare that construct validity was achieved and can proceed with the analysis of the structural model.

7.5. Structural Model

Confirmation of the measurement model has been achieved as it was shown in the previous section and, as such, the fit of the structural path model (Figure 7.2) can be evaluated. The factor structure confirmed in the measurement model is used as the foundation for the structural model. That is, the eight unobserved factors *Acquirer Divestiture, Target Divestiture, Acquirer Redeployment, Target Redeployment, Cost Savings, Market Coverage, Innovation Capability and Post-acquisition Performance,* together with their respective measurement indicators, and the correlated error terms are incorporated into the structural model in order to be evaluated.

Selected goodness-of-fit statistics related to the hypothesised model are presented in the following table. The baseline comparisons fit indices CMIN/DF CFI, IFI, RMSEA and SRMR are all at acceptable levels (see Table 7.4). Given the range of the computed baseline comparisons fit indices, the remaining possible improvement in fit for the hypothesized model appears small as to be of little practical significance.

CMIN/DF	CFI	IFI	RMSEA	SRMR
1.717	0.927	0.928	0.73	0.0626

Table 7.4: Structural Model Fit



Figure 7.2: Structural Model

Figure 7.2 and Table 7.5 report the results for the structural model. The variance (as it can also be seen from Figure 7.2) in long term post-acquisition performance explained by the model is 0.34 or 34%. This is expected given the complexity of the model and the large number of items and factors that can have an effect on post-acquisition performance.

Some preliminary findings can be drawn from these results:

First of all the three mediating variables in the model are *cost savings, market coverage,* and *innovation capabilities;* these variables are assumed to affect the firm's long-term performance.

Second, cost-based and revenue-based synergies contribute to acquisition performance.

Third, Figure 7.2 shows that not all mediating variables have a positive effect on long-term performance, as it was expected a priori. Specifically, *cost savings* was found to have a negative effect on long-term performance, $\beta_{S,P} = -0.31$ (p = 0.073), while *market coverage* and *innovation capabilities* were found to have a positive effect on long-term performance; the estimated coefficients for the aforementioned mediating variables were $\beta_{M,P} = 0.37$ (p = 0.007) and $\beta_{I,P} = 0.49$ (p = 0.003), respectively.

Fourth, the benefits of acquisitions have been viewed as originating from increased cost efficiency gains by reducing slack.

Fifth, the results indicate that benefits can also arise from increased revenues through an enhanced product line and innovation capability (Design cycle and R&D capabilities).

Finally, innovation capability has a stronger impact on value and therefore on postacquisition performance.

Table 7.5 presents a summary of the structural model regression results without the control variables. In the following sections each construct's effect is looked in depth.

	Dependent	Independent	Unst	es	Standardized		
Description	Variable	Variable	Estimat e	S.E.	C.R.	Р	Estimates
Effect of	Performance	Cost Savings	301	.168	-1.793	.073	310
Variables on Post-	Performance	Market Coverage	.345	.128	2.686	.007	.374
Acquisition Performance	Performance	Inn. Capability	.480	.160	3.012	.003	.494
Asset Divestiture	Cost Savings	Acq. Divestiture	268	.148	-1.812	.070	185
Effect on Mediating Variable	Cost Savings	Target Divestiture	.103	.061	1.683	.092	.182
Resource Redeployment	Market Coverage	Acq. Redeployment	.239	.059	4.055	***	.414
	Inn. Capability	Acq. Redeployment	.147	.055	2.655	.008	.268
Mediating Variables	Market Coverage	Target Redeployment	.192	.072	2.653	.008	.272
v artables	Inn. Capability	Target Redeployment	.216	.070	3.078	.002	.323
Cross-Effects of	Cost Savings	Acq. Redeployment	.195	.055	3.533	***	.355
Redeployment	Cost Savings	Target Redeployment	.228	.069	3.290	.001	.340
	Market Coverage	Acq. Divestiture	168	.155	-1.082	.279	110
Cross Effects of	Inn. Capability	Acq. Divestiture	080	.148	538	.590	055
Asset Divestiture	Market Coverage	Target Divestiture	045	.064	711	.477	077
	Inn. Capability	Target Divestiture	.150	.068	2.198	.028	.268

Table 7.5: Structural Model Regression Weights

7.5.1. Asset Divestiture and Cost Savings

The hypotheses **H1a** and **H1b** in Chapter 3 (3.2) argued that the post-acquisition divestiture of the acquirer's and the target's assets improve the long-term performance of the merging firms through *cost savings*. The results presented in Table 7.5 do not support **H1a** since the divestiture of the acquirer's assets has a negative significant effect on cost savings ($\beta = -0.185$, p = 0.07). As it was shown from the descriptive statistics of Chapter 5, there is a low degree of divestiture of the

acquirer's assets compared with the target's assets. Now it was illustrated than when the acquirer divests its assets, this will have a negative impact on cost savings.

However, the results confirm Hypothesis **H1b**, since the divestiture of the target's assets has a positive and statistically significant effect on the cost savings of the merged firm ($\beta = 0.182$, p = 0.092). These results indicate that the process of rationalising the target's business does lead to systematic cost savings and increases value. They also suggest that the acquirer is less effective in rationalising its own assets that those of the target.

The empirical correlation between the divestiture of the acquirer's and target's assets is positive and significant (β =0.227, p<0.001) (Table II.5, Appendix II) indicating that these two actions usually take place at the same time. Therefore even if the direct effect of target divestiture on cost savings is positive, a negative effect on postacquisition performance can be created in combination with the acquirer's divestiture. In this instance a joint divestiture of the target's and acquirer's assets indicates that a mutual restructuring of assets is targeted instead of a standalone target divestiture.

7.5.2. Resource redeployment and revenue-enhancing capabilities

According to hypotheses **H2a** and **H2b** post-acquisition resource redeployment to the acquirer and the target should improve the long-term performance of the merging firms through improved *market coverage* and *innovation capability*. The results presented in Table 7.5 support both of these hypotheses as both *redeployment to target*, (i.e. the shift of resources from the acquiring firm to the target firm) and *redeployment to acquirer*,(i.e. the shift of resources from the target for the effect of *redeployment to target* on market coverage and innovating capabilities were found to be $\beta = 0.414$ (p<0.001) and $\beta = 0.268$ (p<0.05) respectively. And, the coefficients for the effect of *redeployment to acquiring firm* on market coverage and innovating capabilities were found $\beta = 0.272$ (p<0.05) and $\beta = 0.323$, respectively.

These results indicate that post-acquisition resource redeployment to both the target and the acquirer improves the revenue-enhancing capabilities of the merged firm. The flow and effectiveness of resource redeployment is bi-directional, signifying the existence of a process of making use of the acquirer's excessive resources, as well as an investigation process of exploring and acquiring new resources from the target. Thus the target's resources can be leveraged and developed through the acquirer's support structure and systems.

The empirical correlation between resource redeployment to the acquirer and resource redeployment to the target is positive and insignificant (β = 0.57, p>0.10) (shown in Table II.5), suggesting that, in some cases, these two actions do take place at the same time.

7.5.3. Testing for Asymmetries between the Target and the Acquirer

Furthermore, statistical tests were conducted to test for Hypotheses H3a and H3b, in order to check the significance of the differences between the two regression coefficients of the target and acquirer asset divestiture on cost savings and that of the target and acquirer resource redeployment on revenue enhancing capabilities. A fully-specified model with a nested model was compared in AMOS that constrains the two coefficients to be equal. The difference was significant (CMIN=3.945, df=1, p<0.05). This result confirms that the coefficients of acquirer and target divestiture are statistically different with the acquirer coefficient having a higher explanatory power on cost savings than the target's coefficient. Thus, hypothesis H3a is supported.

In addition a statistical test was employed to check the significance of the difference between the two regression coefficients of the target and the acquirer resource redeployment on innovation capability and market coverage. The same method was utilised as before, a fully-specified model with a nested model was compared in AMOS. The difference was not significant (CMIN=1.577, df=2, p>0.10). This result implies that resource redeployment to both targets and acquirers creates value through market coverage and innovation capabilities. Therefore hypothesis **H3b** is not supported.

7.5.4. Potential Cross Effects

Next, the potential cross-effects of asset divestiture and resource redeployment are examined. It was argued in Chapter 3 that cross-effects of asset divestiture on capability enhancement and of resource redeployment on cost savings exist. It was implied that one source of value creation cannot be associated with only one type of post-acquisition activity (cost synergies and resource-based theories). Asset divestiture and resource redeployment mutually have intertwined effects on both types of synergies.

The investigation of potential cross-effects reveals several noteworthy results. First of all, asset divestiture has either no, or a positive effect on revenue enhancing capabilities. The effects are asymmetric depending on the recipient of the divestiture measures. The effect of acquirer divestiture on market coverage ($\beta = -0.11, p > 0.01$) is negative and insignificant and the same holds for innovation capability ($\beta = -0.55, p > 0.01$) (Table 7.5). The effect of the target divestiture is positive and significant on innovation capability ($\beta = 0.268, p < 0.01$), whereas, the effect of target divestiture on market coverage is negative and insignificant $(\beta = -0.77, p > 0.01)$. Those results indicate that the divestiture of the target's assets can help costs and may even enhance innovation capability. Therefore, hypothesis H4a that following an acquisition the divestiture of the acquirer's assets has an effect on revenue enhancing capabilities is rejected. However, hypothesis H4b that following an acquisition the divestiture of the target's assets has an effect on revenue enhancing capabilities is supported. These results indicate the difficulties in realizing the gains of post-acquisition divestiture action. Asset divestiture can sometimes deter a company's development (McKinley, 1993). Downsizing might enable firms to reduce unnecessary resources, thus allowing for a more productive allocation of resources, but it might lead to reduced innovation (Dougherty and Bowman, 1995; Hamel and Prahalad, 1994) and hence reduced revenue potential. Additionally, after a divestiture, due to the manager's being more conservative because they were reluctant of making innovative decisions as they might be having job security concerns can result to less internal innovation of the firm (Hitt et al. 1996).

Second, resource redeployment's effect on cost savings was examined. Acquirer's resource redeployment has a positive and significant effect ($\beta = 0.355, p < 0.001$) on cost savings and the same holds true for the resource redeployment to the target ($\beta = 0.340, p < 0.001$). Therefore, hypotheses, **H5a** and **H5b**, that following an acquisition the redeployment of the acquirer's resources to the target and the target's resources to the acquirer have an effect on cost savings, are supported. These results indicate that resource redeployment not even does not hurt cost but at the same time contributes in achieving higher cost efficiency. One other major implication is that if standalone target divestiture does not improve cost savings, changing the way the target functions through the redeployment of resources to the target facilitate for further reduced costs. This end result is consistent with earlier empirical work that demonstrates that downsizing is more likely to create value when its scope expands to further than only cutting cost through elimination of slack to include related changes and resource reconfiguration (Anand and Sing, 1997; Nohria and Love, 1996).

7.5.5. Summary of Hypotheses Results

Following the analysis of each of the thesis's main research question and hypotheses, a summary of the results is presented below. Table 7.6 presents a summary of the hypotheses results that were formulated and presented in Chapter 3 in detail.

Having analysed and tested the hypotheses using the structural model, in the final section of the empirical analysis, further tests are conducted to control for the sensitivity of the model's results to potential sources of sample heterogeneity emanating from payment method, target and bidder relative size, acquisition classification, acquisition type, redundancy of senior executives, similarities and organisational performance.

The inclusion of all the above control variables does not seem to affect the model's beta estimates for the three mediating variables, which are supposed to affect post-acquisition performance. Indeed, as it is seen from Table 7.7, which reports the results of the structural model with the addition of the control variables, the inclusion of the control variables in the estimation of the structural equation model does not

alter the baseline beta estimates for the effects of *costs savings, market coverage*, and *innovation capabilities* on post-acquisition performance.

Description		Hypotheses	Results
Asset	H1a	Following an acquisition the divestiture of the acquirer's assets improves the post-acquisition performance through cost savings	Rejected
Divestiture Effects	H1b	Following an acquisition the divestiture of the target's assets improves the post-acquisition performance through cost savings	Supported
Resource	H2a	Following an acquisition the redeployment of the acquirer's resources to the target improves the post-acquisition performance through revenue-enhancing capabilities	Supported
Redeployment Effects	H2b	Following an acquisition the redeployment of the target's resources to the acquirer improves the post-acquisition performance through revenue-enhancing capabilities	Supported
Asymmetries	H3a	Following an acquisition the divestiture of target's assets has a lower impact on cost savings than the divestiture of the acquirer's assets	Supported
between the Target and the Acquirer	H3b	Following an acquisition the redeployment of the target's resources to the acquirer has a lower impact on revenue-enhancing capabilities	Rejected
Cross Effects	H4a	Following an acquisition the divestiture of the acquirer's assets has an effect on revenue enhancing capabilities	Rejected
of Asset Divestiture	H4b	Following an acquisition the divestiture of the target's assets has an effect on revenue enhancing capabilities	Supported
Cross-Effects	H5a	Following an acquisition the redeployment of the acquirer's resources to the target has an effect on cost savings	Supported
of Resource Redeployment	H5b	Following an acquisition the redeployment of the target's resources to the acquirer has an effect on cost savings	Supported
	H7	Payment method	Rejected
	H8	The relative size of the target and the acquirer	Rejected
	H9	Different classifications of acquisitions	Rejected
	H10	Different degrees of relatedness between the acquirer and the target	Supported
Propositions	H11	Different degrees of diversification	Rejected
Control	H12	Organisational Changes	Supported
variables	H13	Changes in the number of senior executives made redundant	Rejected

Table 7.6: Summary of Hypotheses Results

7.6. Structural Model with Control Variables

In	the	next	section	the	effect	of	each	individual	source	of	sample	heterog	geneity	on
the basic outcomes of the model is tested separately.														

Description	Dependent Variable	Control Variables	Unsta	Standardize d Estimates			
			Estimate	S.E.	C.R.	Р	
Payment	Inn. Capability	Payment	-0.263	0.066	-4.013	***	-0.329
Method for	Market Cov.	Payment	-0.005	0.065	-0.072	0.942	-0.006
Tunding	Cost Savings	Payment	0.033	0.065	0.512	0.609	0.047
	Inn. Capability	Relative Size	0.005	0.057	0.092	0.927	0.007
Relative Size	Market Cov.	Relative Size	-0.013	0.057	-0.221	0.825	-0.019
	Cost Savings	Relative Size	-0.050	0.057	-0.873	0.383	-0.080
Acquisition	Inn. Capability	Classification	-0.323	0.258	-1.252	0.211	-0.096
Classification	Market Cov.	Classification	0.042	0.257	0.165	0.869	0.014
	Cost Savings	Classification	0.164	0.259	0.634	0.526	0.055
D 1 1	Inn. Capability	Relatedness	0.156	0.069	2.260	0.024	0.191
Relatedness	Market Cov.	Relatedness	0.261	0.073	3.583	***	0.343
	Cost Savings	Relatedness	0.094	0.068	1.377	0.168	0.130
	Cost Savings	Diversification	0.068	0.075	0.899	0.369	0.082
Diversification	Market Cov.	Diversification	0.108	0.075	1.445	0.148	0.124
	Inn. Capability	Diversification	0.137	0.075	1.828	0.068	0.147
	Market Cov.	Org. Changes	0.420	0.115	3.663	***	0.378
Organisational	Cost Savings	Org. Changes	0.235	0.108	2.179	0.029	0.224
Changes	Inn. Capability	Org. Changes	0.393	0.113	3.476	***	0.330
	Inn. Capability	Senior Left	-0.048	0.071	-0.673	0.501	-0.052
Senior Left	Market Cov.	Senior Left	-0.023	0.071	-0.322	0.747	-0.027
	Cost Savings	Senior Left	-0.001	0.071	-0.021	0.983	-0.002

Table 7.7: Summary of Hypotheses for Control Variables

7.6.1. Payment Method

In Chapter 5 it was shown that the majority of the sampled deals were financed with cash (79%). Also, according to hypothesis **H7** the payment method affects the relationship of cost based synergies and resource enhancement capabilities with post-

acquisition performance. Controlling however for the method of payment in the structural equation model does not change the results of the baseline model, at least when it comes to two of the three mediating variables.

Specifically, Table 7.7 (a more detailed version in Table II.8, Appendix II) shows *cost savings* to have no statistically significant effect on post-acquisition performance; the beta estimate for this variable was found to be -0.245 but it is statistically insignificant at the 10% level of significance. In the estimated baseline without controlling for the method of payment, cost savings were found to exert a negative and statistically significant effect on long-term performance. Then, the new estimates for the effect of *market coverage* and *innovation capabilities* remain roughly the same; the estimated coefficients for the aforementioned mediating variables were $\beta_{M,P}^* = 0.387$ and $\beta_{I,P}^* = 0.429$, while in the baseline model the corresponding estimates were $\beta_{M,P} = 0.374$ and $\beta_{I,P} = 0.494$.

The payment method was examined against the three mediating variables. Payment method was found to have a negative and significant effect on innovation capability $(\beta = -0.329, p < 0.001)$. Moreover, the results indicate that payment method has a negative insignificant effect on market coverage $(\beta = -0.006, p > 0.01)$ and a positive insignificant effect on cost savings $(\beta = 0.047, p > 0.01)$. As it was argued in Chapter 2 and 3 of the thesis, cash-financed deals enhance post-acquisition performance even if it is by a small amount. The findings indicate that innovation capability is impaired which can be due to the fact that cash and therefore financing is less is readily available post the acquisition.

Overall, post-acquisition is not sensitive to the method of payment and, therefore proposition H7, that acquisitions funded with cash enhance post acquisition performance, must be rejected.

7.6.2. Target and Bidder Relative Size

According to Hypothesis **H8**, the relative size of the target and the acquirer affects the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.

Controlling for the relative size of the target in the structural equation model does not alter the results of the baseline model. As Table II.8 (Appendix II) shows the beta estimates for *cost savings, market coverage* and *innovation capabilities* are very close to the estimates of the baseline model. The new estimates are $\beta_{C,P}^* = -0.326$, $\beta_{M,P}^* = 0.397$ and $\beta_{I,P}^* = 0.49$, while in the baseline model the corresponding estimates were $\beta_{C,P} = -0.326$, $\beta_{M,P} = 0.374$ and $\beta_{I,P} = 0.494$.

The relative size of the target was measured against the mediating variables. The results indicate that relative size has a negative and insignificant result on innovation capability, $(\beta = -0.007, p > 0.01)$, on market coverage $(\beta = -0.019, p > 0.01)$ and on cost savings $(\beta = -0.080, p > 0.01)$. One reason for this could be that the relative size of the majority of the targets is small and possibilities for synergies through cost efficiencies and resource enhancement are difficult to be realised (Seth, 1990b).

7.6.3. Acquisition Classification

According to Hypothesis **H9** the classification of an acquisition affects the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance. However this proposition is hardly validated when control for this type of sample heterogeneity, i.e. acquisition's classification, is taken into account in fitting the structural equation model. Specifically, as Table II.8 shows, on the one hand, the beta estimates for the effect of *innovation capabilities* are now higher ($\beta_{I,P} = 0.601$ compared with the baseline estimates $\beta_{I,P} = 0.494$), but, on the other hand, the estimates for *cost savings* are even more negative ($\beta_{C,P} = -0.42$ against $\beta_{C,P} = -0.326$).

Acquisition classification was also examined against the three mediating variables. Classification was found to have a negative insignificant result on innovation capability ($\beta = 0.096, p > 0.01$), a positive insignificant effect on market coverage ($\beta = 0.014, p > 0.01$) and finally a positive and insignificant effect on cost savings ($\beta = 0.055, p > 0.01$). Therefore proposition H9 in not supported.

7.6.4. Acquisition Relatedness and Diversification

Hypothesis **H10** argued that different degrees of relatedness between the acquirer and the target affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance. Indeed, Table II.8 shows that the beta estimates for the effect of *market coverage* and *innovation capabilities* are higher than in the case of the baseline model; these estimates are $\beta_{M,P}^{*} = 0.46$ for market coverage ($\beta_{M,P} = 0.374$) and $\beta_{I,P}^{*} = 0.602$ for innovation capabilities ($\beta_{I,P} = 0.494$). However, as in the case of controlling for acquisition classification, the estimates for *cost savings* are even more negative $\beta_{C,P}^{*} = -0.499$ compared with $\beta_{C,P} = -0.326$.

So hypothesis H10 is supported, as there are also positive and significant effects on innovation capability ($\beta = 0.191, p < 0.05$) and market coverage ($\beta = 0.343, p < 0.001$). Even though there is a positive insignificant result on cost savings ($\beta = 0.130, p > 0.01$) proposition H10 is supported.

However, the same does not hold for Hypothesis H11 that different degrees of diversification affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance. Controlling for diversification does not have any effect on the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance. Indeed, as Table II.8 shows that the beta estimates for the effect of *cost savings, market coverage*, and *innovation capabilities* are marginally the same of the baseline model's estimates; these estimates are $\beta_{C,P}^* = -0.333$ for *cost savings* ($\beta_{C,P} = -0.326$), $\beta_{M,P}^* = 0.397$ for market coverage ($\beta_{M,P} = 0.374$), and $\beta_{I,P}^* = 0.503$ for innovation capabilities ($\beta_{I,P} = 0.494$).

This result is not surprising. As it has already been argued - Chapter 2 - acquisitions usually occur in order to expand business activities and to diversify revenues, but many of those acquisitions later prove to be unsuccessful (Andrade *et al.*, 2001) Further, the benefits from diversification depend on the degree of relatedness of the merged firms business lines (Lee and Liebermand, 2010). Hence the lack of

statistically significant findings may be the result of high degree of relatedness of the business lines of the merged firms.

7.6.5. Organisational Changes

According to hypothesis **H12**, organisational changes affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.

This proposition is confirmed in the case of market coverage and innovation capabilities. Table II.8 shows that the beta estimates for the effect of *market coverage*, and *innovation capabilities* are higher than the estimates of the baseline model; these estimates are $\beta_{M,P}^* = 0.413$ for market coverage ($\beta_{M,P} = 0.374$), and $\beta_{I,P}^* = 0.721$ for innovation capabilities ($\beta_{I,P} = 0.494$). However the effect of costs savings is $\beta_{C,P}^* = -0.591$ compared with $\beta_{C,P} = -0.326$ in the baseline model.

7.6.6. Senior Executives Left

As it was discussed in Chapter 2, the acquirer may make a bid for a target and once taken over the bidder may then attempt to restructure the operations and the management style of the target (Copeland et al., 2000), by dismissing senior top executives and managers of the target. Hypothesis **H13** argued that changes in the number of senior executives made redundant affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance.

This proposition in not supported as it can be seen form Table II.8 as well when senior left is examined against the mediating variables all of the results are negative and insignificant. So either there was no sizable dismissals of target firm's senior executives or the shakedown in the target firm (in terms of senior executives dismissed) was not significant enough to affect the performance of the company.
	Propositions Control Variables	Results
H7	Payment method	Rejected
H8	The relative size of the target and the acquirer	Rejected
H9	Different classifications of acquisitions	Rejected
H10	Different degrees of relatedness between the acquirer and the target	Supported
H11	Different degrees of diversification	Rejected
H12	Organisational Changes	Supported
H13	Changes in the number of senior executives made redundant	Rejected

Table 7.8: Summary of Hypotheses Results

7.7. Conclusion

This chapter examined, using structural equation modelling, the underlying relationships among the latent constructs developed from *factor analysis* presented in Chapter 6. *Section 7.2* presented the statistical technique of structural equation modelling and Section 7.3 described and defined the model under estimation.

CFA analysis was carried out to determine the degree of model fit and the adequacy of the factor loadings, the standardized residuals and explained variances for the measurement variables. The baseline comparisons fit indices CMIN/DF CFI, IFI, RMSEA and SRMR were all at acceptable levels. Given the range of the computed baseline comparisons fit indices, the remaining possible improvement in fit for the hypothesized model appeared small as to be of little practical significance. The regression weights were all significant and all the hypothesised constructs and variables of the model are eligible for further inspection and testing of the structural model. Also, the unstandardized regression weights were all statistically significant according to the critical ratio test (> ± 1.96 , p < .001). These values indicated that the 26 measurement variables are significantly represented by their respective latent constructs. Based on these tests, it can be concluded that the measurement model represents an "adequate fit" to the data. Also, further tests were employed on the measurement model in order to check for construct validity, item reliability, internal consistency and discriminant validity. The results of these tests indicated that all of the items are above 0.5 for AVE and above the 0.7 threshold for construct reliability (CR). Therefore it is safe to state that construct validity was achieved and can proceed with the analysis of the measurement model. Also, the maximum squared variance (MSV) and the average shared squared variance (ASV) did not exceed the AVE, this was verified as well. Finally, the square root of the AVE was not be less than any of the correlation with another factor.

All items satisfied all the thresholds and therefore it is safe to declare that construct validity was achieved and confirmation of the measurement model has been achieved the structural path model (Figure 7.2) was evaluated. The factor structure confirmed in the measurement model was used as the foundation for the structural model. That is, the eight unobserved factors *Acquirer Divestiture, Target Divestiture, Acquirer Redeployment, Target Redeployment, Cost Savings, Market Coverage, Innovation Capability and Post-acquisition Performance*, together with their respective measurement indicators, and the correlated error terms were incorporated into the structural model in order to be evaluated.

Fitting the structural equation model did not support the cost-based rationale for undertaking acquisition activity. **Cost savings** not only did not improve postacquisition performance, but it was found to be detrimental to it.

To account for the negative effect of cost savings on post-acquisition performance one needs to look at research hypotheses H1a and H1b. Specifically, the empirical results did not support research Hypothesis **H1a**, since the divestiture of the acquirer's assets was found to have a negative and statistically significant effect on cost savings. However, the results did confirm Hypothesis **H1b**, as the divestiture of the target's assets had a positive and statistically significant effect on the cost savings of the merged firm.

Hence these results indicate that the process of rationalising the target's business does lead to systematic cost savings. They also suggest that the acquirer is less effective in rationalising its own assets that those of the target. The empirical correlation between the divestiture of the acquirer's and target's assets is positive and suggests that these two actions usually take place at the same time. Therefore even if the direct effect of target divestiture on cost savings is positive, a negative effect on post-acquisition performance can be created in combination with the acquirer's divestiture. In this instance a joint divestiture of the target's and acquirer's assets indicates that a mutual restructuring of assets is targeted instead of a standalone target divestiture.

In contrast with the cost-based rationale, the **revenue-based** rationale for acquisitions was upheld, as market coverage and innovation capabilities were found to have a positive effect on post-acquisition performance. Specifically, **market coverage** and **resource innovation** were found to have a statistically significant positive effect on post-acquisition performance, that is, the research hypotheses **H2a** and **H2b** were confirmed.

The flow and effectiveness of resource redeployment is bi-directional, signifying the existence of a process of making use of the acquirer's excessive resources, as well as an investigation process of exploring and acquiring new resources from the target. Thus the target's resources can be leveraged and developed through the acquirer's support structure and systems. Also, the empirical correlation between resource redeployment to the acquirer and resource redeployment to the target was positive and insignificant, suggesting that, in some cases; these two actions do not take place at the same time.

Then the potential cross-effects of asset divestiture and resource redeployment were examined. Hypothesis **H4a**, according to which following an acquisition the divestiture of the acquirer's assets has an effect on revenue enhancing capabilities was rejected. However, empirical support was found for hypothesis **H4b**, according

to which following an acquisition the divestiture of the target's assets has an effect on revenue enhancing capabilities was supported. These results indicate the difficulties in realizing the gains of post-acquisition divestiture action. Asset divestiture can sometimes deter a company's development (McKinley, 1993). Downsizing might enable firms to reduce unnecessary resources, thus allowing for a more productive allocation of resources, but it might lead to reduced innovation (Dougherty and Bowman, 1995; Hamel and Prahalad, 1994) and hence reduced revenue potential. Additionally, after a divestiture, due to the manager's being more conservative because they were reluctant of making innovative decisions as they might be having job security concerns can result to less internal innovation of the firm (Hitt *et al.*, 1996). Other potential reasons that might be associated with downsizing involve stunting risk taking (Staw *et al.*, 1981), and violating employee trust (Shleifer and Summers, 1988).

Additionally hypotheses **H5a** and **H5b**, according to which following an acquisition the redeployment of the acquirer's resources to the target and the target's resources to the acquirer have an effect on cost savings, are supported. Resource redeployment not even does not hurt cost but at the same time can subsidise higher cost efficiency. One other major implication is that if standalone target divestiture does not improve cost savings, changing the way the target functions through the redeployment of resources to the target facilitate for further reduced costs. This end result is consistent with earlier empirical work that demonstrates that downsizing is more likely to create value when its scope expands to further than only cutting cost through elimination of slack to include related changes and resource reconfiguration (Anand and Sing, 1997; Nohria and Love, 1996).

Finally control variables to account for other possible sources of sample heterogeneity were included in the statistical analysis, in two steps. In the first step, all controls were included in the analysis, while in the second step each control was included separately. The baseline's model estimates concerning the effect of cost savings, market coverage, and innovation capabilities on long-term performance were $\beta_{C,P} = -0.326$, $\beta_{M,P} = 0.374$, and $\beta_{I,P} = 0.494$, respectively.

When all control variables were included in the model, no evidence of any model sensitivity to the controls was found. Presumably, this is down to the fact that some controls may be important and some others are not and hence the net effect is neutral. But when each control was included one at a time, some differentiating results were derived.

To begin with, controlling for the **payment method** (whether the acquisition was cash-funded or not) does not affect the main results concerning the determinants of post-acquisition performance. The same holds for the control of **relative size** of the target and the acquirer; the model's estimates was not found to be sensitive to this control. One reason for this could be that the relative size of the targets is small and due to the sample characteristics. Controlling for **diversification** also does not affect post-acquisition performance. While, different degrees of relatedness between the acquirer and the target have an effect on acquisition performance, different degrees of diversification do not affect post-acquisition performance.

However, controlling for **organisational changes** did change the results when it comes to the effect of the market coverage (more positive effect) and cost savings (more negative effect). Also, when looking into the effects of the **acquisition classification**, i.e. whether the acquisition was friendly or not, the evidence revealed an increased positive effect on innovation capabilities and an increased negative effect and cost savings, on post-acquisition performance.

In the next chapter of the thesis the conclusion along with the main findings of the thesis will be presented.

8. Summary, Conclusions and Recommendations

8.1. Introduction

The performance of mergers and acquisition has been in the centre of attention since the beginning of the last century. Recently it was observed that worldwide M&A activity reached in 2010 almost US\$3 trillion, down from US\$5.5 trillion from 2007. In the Greek financial sector the M&A activity started picking up in 1995 and culminated in 2001. More particularly, there was decline in total value of transactions in the volume of mergers and acquisitions in Greece considerably reaching \notin 7bn in 2008 (with 153 transactions) and \notin 4bn in 2009 (with 102 transactions) (Center for Economic Research, 2010). In addition, the majority of the M&A deals concentrated in two sectors: the *finance* and the *technology and telecommunications* sector. Over the period 1999-2009 the Greek finance sector accounted for almost one quarter of the M&A transactions conducted (Center for Economic Research, 2010). Indeed, in the wake of Greece joining the euro the Greek banks realized that their size was too small for operation in an integrated European banking market.

The academic literature offers limited evidence on Greek M&A post-acquisition performance and its driving factors. This thesis addressed the issue of the impact of two post-acquisition actions, namely, asset divestiture and resource redeployment on the long-term performance of Greek M&A deals.

This chapter attempts to summarize the arguments of the thesis and draw some conclusions. An overview of the theoretical model is presented in Section 8.2. Section 8.3 presents the contributions of this thesis and provides recommendations for further research. Section 8.4 discusses the limitations of this research and sets out avenues for future research.

8.2. The Theoretical Model

This thesis offers an in-depth examination of the effect of post-acquisition *asset divestiture* and *resource redeployment* on long-term corporate performance for a number of Greek M&A deals that took place over the period 2005-2009. The

primary propositions examined were the following. First, post-acquisition asset divestiture and resource redeployment positively affect the long-run corporate performance through the influence of two *mediating variables*, namely *cost savings* and improved *revenue enhancing capabilities*. Second, cost savings were assumed to result from divesting either the acquirer's or the target's assets, and third revenue enhancing capabilities were assumed to be derived from achieving increased market coverage and via the exploitation of innovation capabilities.

Even though theories regarding value creation – using rationales from the cost efficiency and the resource base view – have been used previously, the author is not aware of any large scale empirical study that examines the dynamics of the relationship between post-acquisition activities and post-acquisition performance, using self-reported measures data from Greece as well as controlling for payment method, relative size, acquisition classification and type, relatedness, organisational changes and the number of top executives made redundant.

Various theoretical approaches dealing with the underlying motives of M&As exist. The objective of this thesis was not to discuss in detail all of the underlying theoretical approaches of M&As and, as such, the theoretical foundations this thesis was built upon were mainly discussed. It was argued that wealth and profit maximization through the M&A process can be attained through a combination of synergies; revenue-based and cost based.

Revenue-based synergies can be attained through market coverage and innovation capabilities. Greater **market coverage**, through geographical extension, allows the merged firm to sell existing products, once confined to particular markets, to a wider body of consumers, thereby enhancing the merged firm's revenues. At the same time the company, by increasing its geographical coverage, diversifies its sources of revenues, since different markets may be hit by different macroeconomic shocks, or even the same macroeconomic shock may have different impact in two different markets. **Innovation capabilities** can be used strategically by firms to achieve competitive advantage. Firms therefore can also revise their strategies in accordance

with ever changing markets and customer needs so that they can create value and growth and in addition achieve superior performance.

Cost savings is the second source of operating synergies. Under certain conditions, a larger firm may operate more efficiently than two smaller firms. **Efficiency gains** may come as the result of a number of factors which lead to lower costs. In order for economies of scale and scope to be exploited in an acquisition process, generally it can happen so through **asset divestiture**. Therefore, potential benefits exist in investigating the conditions under which firms can obtain valuable resources from acquisitions, even if target assets are subsequently divested.

This thesis also examines the effect of *resource redeployment* on the post-acquisition performance of the merged firms. In general, resource redeployment deals with the shifting of resources from one firm to another, so that the latter can be used in a more efficient manner. In order to explain this reallocation of resources the thesis was based upon the *resource-based view* (RBV) or *resource-based theory* (RBT) and the more specifically in the dynamic capability perspective.

The **resource-based view (RBV)** of the firm advocates that a company's competitive advantage originates at the firm, and not at the industry level, and specifically in the unique bundle of *resources* and *capabilities* that the firm commands. It is not however that resources type as such are important, rather it is their functionality and how productively they are employed that makes the difference. This brings up the issue of **capabilities**. In other words, a firm will combine its resources with its capabilities in order to perform a business process in line with its strategy. The dynamic capability perspective is an extension of the RBV in that their assumptions are similar. In order to better comprehend the expression dynamic capabilities according to Abrosini and Bowman, (2009), is forget the definition of capability according to the RBV, and not to decompose the term into two separate words. There exist four main processes of dynamic capabilities; a) **reconfiguration**, b) **leveraging**, c) **learning**, and d) **creative integration**.

Therefore using those arguments, sustaining long-term competitive advantage lies in the recombination of assets and resources that is resource reconfiguration and in deploying a resource into a new field (an existing brand to a new product). In addition, the sustainability of long-term competitive advantage can derive from the effective and resourceful execution of tasks that originates from the successful implementation or not and the firm's ability to integrate its assets and resources. In acquisitions asset divestiture and resource redeployment are viewed as parts of a shared process of reconfiguration of the target and the acquirer.

8.2.1. Reflecting/reviewing on the constructs

To test the above propositions a *Structural Equation Model* (SEM) was fitted to subjective measures of corporate performance. Essentially, the thesis has built upon and expanded the methods of analysis used by *Capron* (1999) and other contributions (Capron, *et al.*, 1998; Capron and Hulland, 1999; Capron, *et al.*, 2001; Capron and Pistre, 2002; Maksimovic *et al.*, 2011) in order to examine the impact of post-acquisition actions (i.e. asset divestiture and resource redeployment) on the post-acquisition performance.

The thesis examines the effect of the *post-acquisition measures* taken by the management of the acquiring firm, in terms of *resource redeployment* and *asset divestiture*, on the post-acquisition performance of the merged firms. The primary hypothesis being tested is that the effect of asset divestiture and resource redeployment is transmitted to post-acquisition performance through the two **mediating variables** of *cost savings* and *revenue enhancing capabilities*.

On the one hand, cost-efficiency theories focus on cost savings resulting from an acquisition. In turn, these cost savings are achieved through *asset divestiture*. In this thesis, asset divestiture refers to the extent to which merging firms eliminate their physical assets, dispose of inefficient management (and management practices) and cut back their personnel in different areas, such as R&D, manufacturing, logistics, sales networks, and administrative services. In turn, selling excess physical assets, laying off employees, and shutting down excess facilities may lead the (merged) firm to sell and produce goods more efficiently and this improved efficiency can be, in turn, translated into cost savings. Note, that improved efficiency essentially implies a better allocation of resources through the elimination of inefficient ones.

On the other hand, the *resource-based view* (RBV) of the firm emphasizes the role of proper resource use, and resource redeployment, in providing the firm with a comparative advantage and hence boosts the revenues of the merged firm. **Resource redeployment** refers to "the extent to which a target or an acquiring firm uses the other firm's resources," such as R&D capabilities, manufacturing know-how, marketing resources, supplier relationships, and distribution expertise. Note, that resource redeployment can enhance revenue, either by increasing *market coverage* (through geographical extension of the market and product line expansion) or by improving *innovation capabilities* (through design cycle and R&D capabilities).

Aside from the direct effects on the mediating variables, asset divestiture and resource redeployment can have **indirect**, or **cross effects** on cost savings and revenue enhancement capabilities.

Finally, the post-acquisition performance (which is what *asset divestiture* and *resource redeployment* are supposed to affect) is measured by **self-reported measures** of changes in market shares, sales, intrinsic profitability, and relative (to the industry's) corporate profitability.

8.2.2. Main Findings from the Thesis

The descriptive statistics of the sample (analysed in Chapter 5) revealed a number of interesting features of the sample. To begin with, the sample in the study comprised Greek acquirers that were involved in M&A activity during the period of 2005 to 2009. Looking into the categories of the companies examined, the majority (50%) fall in manufacturing (26.47%) and financial intermediation (23.53%). A summary of the main findings are presented below.

8.2.2.1. Summary of Descriptive Statistics

The deals surveyed mainly represent cases where larger firms acquired smaller ones. More specifically in the majority of the deals (60.3%) in the sample, the **relative size** ratio (that is the relative size of the target to the acquirer, on the basis of their annual sales) was below 25%, while only 2.9% of the sampled deals exhibited a ratio above

100%. This indicates that the sampled deals mainly represented cases where large firms acquired smaller ones.

The companies examined, exhibited a good degree of business relatedness, and hence there were opportunities for cost savings to be achieved through divestiture of redundant assets and resource redeployment. More specifically, the descriptive analysis revealed regarding **similarities in products and services** 72% of the managers responded in the questionnaire as being "a lot" or "absolutely similar". Regarding **similar technology** 55.9% replied that it was "a lot" or "absolutely similar". In addition, concerning **similarities in their customers** they indicated that 66.1% were "a lot" or "absolutely similar". As far as similarities in their **geographical markets** were concerned, 58.1% answered that were "a lot" or "absolutely similar".

Furthermore, when asked whether they were **direct competitors** 41.2% indicated "not at all" or that there was "some" direct competition, while 31.7% indicated that they were "a lot" or "absolutely" direct competitors. Finally, regarding the question about **complementarity of products/services** the managers answered that 47.1% were "a lot" or "absolutely complementary" whereas 30.1% indicated that they were "not at all" or "some" complementarity.

Subsequently, the geographical scope of the deals examined in the sample was considered. The findings revealed that 80 per cent of the M&As represented as domestic deals, whereas cross-border acquisitions only account for 20% of the sample. In addition, the target's home country was examined. This 20% of cross-border acquisitions that was observed represent acquisitions of targets from Eastern Europe (Romania, Bulgaria, Serbia, Cyprus, Ukraine and Poland) and the remaining 4 (3%) come from Asia and Africa (Turkey and Egypt).

The type of **diversification** the acquirer aimed to achieve through the M&A deal was examined as well. The majority of the companies in the sample (44%) diversified into related businesses while 24% were focused on one main business and 32% were conglomerates that diversified into related business.

When the **method of payment** was examined, it was found that cash was the preferred method of payment for the overwhelming majority of sampled cases (79%). This was followed by securities (10.1%), securities exchange (6.5%), and a combination of cash and securities (4.3%).

Moving on, the **acquisition classification** was also examined. The descriptive statistics revealed that 95.6% of the cases were classified as friendly.

Furthermore, the **rationalisation of the acquisitions** was examined. The main motive behind the rationalisation for the acquisition according to the respondents was to **increase market share** (36%). The second most significant rationale was **geographic expansion**, as indicated by 20.6% of the respondents. These two motives of rationalisation chosen by the respondents, confirm this thesis theoretical framework. It was argued that entering a new market is considered as one of the most important motives for participating in an acquisition (Hagedoorn and Sadowski, 1999). But by entering a new market, a company increases its market coverage, provided the acquisition leads to geographic and product line expansion (Aaker, 1996; Srivastava *et al.*, 1998). Expanding across geography enables businesses to sell their products to whole new markets and in this way to increase revenues.

Furthermore, expansion in **new product lines** ranked 3rd among responses, where 18.3% of the respondents consider it as the most significant motive, and 29.2% viewed it as a significant rationale for an acquisition. New product lines are a logical choice of rationalising an acquisition. This is because new product lines along with brand reputation exploitation and sales network or marketing activities, can improve profits (Capron and Hulland, 1999). As far as **cost efficiency** is concerned, 22.3% of the respondents considered it to be a significant motive, while 26.8% gave it a score of 3 (neutral). The exploitation of resource redeployment (through an M&A activity) may lead to improvements in cost efficiency (Teece, 1982, Panzar and Willig, 1981). The motive that ranked last according to the answers on the questionnaire was to **eliminate or reduce competition**, where, out 101 respondents, 11 considered it as the as most significant reason (8.1%)

Next the statistics regarding the impact of **organisational changes** that took place within the business/es after the acquisition were presented. Four items/variables were used to capture these changes, namely post-acquisition network changes, post-acquisition knowledge changes, retention of the acquired firms' management team and formal organisational changes affected from the retention of the management team. In the first item, With respect to the post-acquisition organisational **network changes**, 31.6% of the respondents considered the network changes as a "positive impact" and 41.2% as "somewhat positive". Looking at the responses related to organisational **knowledge change**, 39.7% rated these changes as "somewhat positive" and 28.7% as "positive". Shifting the focus to the organisational changes affected from the retention of the acquired firm, 36% of the respondents viewed them as "neutral" and 29.4% as "positive". Finally, 32.4% of the respondents viewed the formal organisational changes affected from the retention of the acquired firm as "somewhat positive".

Another important organizational change is the **retention** (or not) of the target's **top management team** (**TMT**). The descriptive results indicated that for 49.3% of the cases examined, no executive was made redundant, followed by 11.6% of the deals, where two executives from the top management team were made redundant following the acquisition. Therefore, for the majority of the cases, no significant redundancies of the top management team were made.

8.2.2.2. Summary of Post-Acquisition Divestiture Measures

This section presents the statistics of the respondent's answers to questions regarding their assessment of the rationalisation and restructuring measures that have been implemented following the acquisition. The managers responded to the questions from two different perspectives that of a) the acquired business and, b) existing business.

Statistics showing the responses related to the **acquirers**' and the **targets**' degree of consolidation and restructuring across five functions, namely: manufacturing, distribution and services, sales networks, administrative services and R&D were presented. Those functions were also divided into two parts: a)

consolidation/restructuring of physical manufacturing facilities and/or points of services, and, b) **reduction** in manufacturing/services workforce following the acquisition. Five thresholds were defined in order to capture to what percentage the assets and the personnel were affected (0-20%, 21-40%, 41-60%, 61-80% and 81-100%).

The statistics illustrated that the degree of post-acquisition **asset divestiture** for the **target** varies across the five functions and the various levels. Specifically, the extent of *asset divestiture* was concentrated in the 0-20% threshold of assets divested for the majority of cases. Also, it is worth noting that 20% to 22% of the acquirers divested above the 81% threshold of their assets. In addition, the statistics for the respondents' indication of the percentage of consolidation and restructuring that took place for the **existing business** across the same five functions the results indicated that for the most cases, the acquirers divested their assets less than or equal to 20% across all of the five functions.

Having analysed the results for both the target and the acquirer a comparison of the extent of asset divestiture of the target and acquiring firms were made. For example, looking into the 61% and above threshold (61% to 100%) of the assets divested following the acquisition, a total of **18.4**% (=12.5% + 5.9%) was reported as far as the reduction in the *physical manufacturing facilities and/or points of services closed* of the target firm was concerned; the corresponding figure for the acquiring firm was **1.5**% (=1.5%+0%). The same held across all functions. Therefore, the target's assets were divested in greater numbers than the acquirer's assets. Of course, the fact that the target's assets are more likely to be divested than the acquirer' is a finding consistent with those in the literature (see Capron *et al.*, 2001; Maksimovic, 2011).

8.2.2.3. Summary of Post-Acquisition Resource Redeployment Measures

This section presents the post-acquisition **resource redeployment** measures. The descriptive statistics regarding the redeployment of resources from the **target** in order to assist the existing business revealed that across all five categories the majority of the respondents reported that their businesses redeployed resources to "some extent". For instance, R&D was mostly redeployed to "some extent" (33.1%),

manufacturing was 27.9%, marketing (28.7%), supplier relationship (36%) and distribution expertise (26.5%). The above statistics are consistent with (Capron 1999), who states that redeployment from the target to the acquirer is rather uncommon.

Conversely, looking into the descriptive statistics for redeployment of resources from the **acquirer** in order to assist the target revealed that across all five categories the majority of the respondents reported that their businesses redeployed resources to "a larger extent". Specifically, it was observed for R&D (27.9%), manufacturing (36%), marketing (30.1%), supplier relationship (30.1%) and distribution expertise (30.9%).

The comparison of the extent of resource redeployment across the acquiring firm and the target yielded some interesting results. In order to calculate the degree of redeployment, the percentages of the responses "to a large extent" and "to a very large extent" for the acquiring firm and the target firm were summed up. A total of **27.2%** (=18.4%+8.8%) of the respondents declared there was redeployment of R&D to the acquiring firm; that is, the acquiring firm used the target firm's **product innovation capabilities** "to a large extent" or "to a very large extent", whereas, a total of **44.1%** (=27.9%+16.2%) of the respondents believed that the target firm used the acquiring firm's **product innovation capabilities** "to a large extent" or "to a large extent" or "to a very large extent" or "to a very large extent" or "to a very large extent" or "to a very large extent" or "to a very large extent".

The extent of redeployment to target (i.e. the movement of resources from the acquirer to the target) was greater than the extent of redeployment to the acquiring firm. Thus, in the sampled cases of M&A activity, resources moved from the acquirers to the target companies. The above findings are consistent with Capron (1999) who stated that larger redeployment from the acquirer to the target is commonly used in order to enhance post-acquisition performance

8.2.2.4. Summary of Value Creating Mechanisms

As it has been argued the model in this thesis considers three ways of improving revenues: *cost savings* (product costs and input prices), *market coverage* (broadening

of product line and geographical coverage) and, *enhanced innovation capability* (R&D capabilities and design cycle).

The questionnaire was divided into two sections (A and B) for these questions in order to capture all of the three cases. Section A referred to the acquired and existing business and Section B to the consolidated one. Out of the 136 respondents, 43.5% answered Section A and 56.5% answered Section B.

Regarding **Section A** the impact of acquisition on the **target** was reported first. The majority of respondents reported a "positive impact". Second the statistics regarding the impact of the acquisition on the position of the **acquirer** were presented. The majority of the respondents' reported that for the existing business the impact ranged from "neutral" to "positive impact".

Section B referred to the impact of the acquisition of the **consolidated** business. Most of the respondents indicated that for the consolidated business the impacted extended from "neutral" to "positive".

It is evident that in all of the three cases (acquired, existing and consolidated business) that the impact of the acquisition was viewed as positive by the managers in the sample. Therefore, taking into consideration, that value is created through the acquisition, it was anticipated that post-acquisition performance will be enhanced.

8.2.2.5 Summary of Acquisition Performance Measures

The respondents were asked to rate the post-acquisition performance by providing self-reported figures of changes in market share, sales, intrinsic profitability and relative profitability compared to the industry average since the acquisition. The questionnaire was also divided into two sections (A and B) to distinguish between the two types of post-acquisition integration. Specifically, section A referred to the acquired and existing business and section B to the consolidated one. So, 43.5% of the respondents answered the section regarding the Section A and whereas the remaining 56.5% answered the section regarding the consolidated business Section B.

Regarding Section A, first the change of the acquisition performance for the target was depicted. The majority of the answers indicated "some increase" across the four items. The same results were observed ("some increase") for the majority of the respondent's answers regarding the **acquirer** as well.

Section B referred to the **consolidated** business. Here, most of the answers reported "some increase" across all self-reported figures as well. Regarding the market share 58.4% reported "some increase", the same holds for sales (53.2%), intrinsic profitability (54.5%) and profitability (50.6%).

It is clear from these findings, that across all businesses (acquired, existing and consolidated) managers' report "some increase" on post-acquisition performance. Drawing from the resource-based theory of the firm and given the descriptive statistics presented in this chapter the expectation of an increased post-acquisition performance holds true.

8.3. Research Contributions and Implications for Further Research

In this section the contributions of this thesis will be discussed, along with a summary of the structural model's results and implications for further research

8.3.1. Theoretical Contribution

This thesis contributed to the debate on the effectiveness of M&A activity in several ways. There exist a small number of comprehensive researches on M&As that look into this phenomenon in other countries outside of the US and the UK capital markets. In addition most of these studies examine post-acquisition performance by employing accounting data and event based studies with stock returns. Therefore, the originality of this study is that it tries to obtain new insights on the subject of the post-acquisition performance using arguments from the cost-based and resource-based synergies, the resource-based view (RBV) of the firm, the dynamic capabilities perspective employing primary data of subjective measures. In addition, looking into recent Greek M&A literature that involve post-acquisition performance of M&As in Greece, the results apart from a few cases reveal a negative impact on post-acquisition performance. Thus, it is in that scarcity of research of asset divestiture

and resource redeployment as predictors of post-acquisition performance in Greece and in that diversity of the results from previous studies that motivated the author to examine those phenomena. Therefore, this is (to the best of the author's knowledge) the first large-scale empirical study conducted in Greece drawing on detailed primary data on a high range of post-acquisition actions followed by the managers of the acquiring companies rather than secondary data.

Second, the majority of the literature employing cost-based and resource based arguments to examine post-acquisition performance looked only into horizontal acquisitions (Anand and Singh, 1997; Capron *et al.*, 1998; Capron, 1999; Capron and Mitchell, 2001; Krishnan *et al.*,2004; Moliterno and Wiersema, 2007). This thesis contributed to the literature by examining both horizontal and conglomerate acquisitions. Therefore, by examining several post-acquisition actions it was shown that different types of synergy (Capron, 1999) and value creation (Chatterjee, 1986) can be associated with both types of acquisitions, contrasting the critique often addressed to previous studies which associated a type of acquisition with a type of synergy. One explanation can be due to increased geographical and market coverage that results in increased market power. It was argued in the literature review that according to economic theories on acquisition motives corporate value can be increased through increasing market power. With increased market power the firm can charge a higher price in order to earn a greater profit margin and thus increase profitability (Chatterjee, 1986, Lubatkin, 1983;1987)

Third, this thesis extended the existing body of research by including new control variables; namely the payment method, acquisition classification, acquisition type, business relatedness, organisational changes, the number of top executives made redundant. At the same time, the thesis controls for established control variables such as the relative size and geographic scope.

Fourth, at the conceptualisation and measurement level, this thesis contributed to the debate on whether and to what extent post-acquisition performance in Greek M&A deals is influenced by asset divestiture (and hence cost savings) and resource redeployment (and hence improved revenues). The analysis was conducted by using

an established set of measures and by adding items and variables and methodologies the study encapsulated this vast range of post-acquisition actions.

Finally, improvements and changes were made on the questionnaire employed using the pre-testing procedure. The majority of the reviewers commented on the order of the questions of the questionnaire. The order of the questionnaire changed to reflect their suggestions. The final order of the sections was as follows: 1) Value creating mechanisms, 2) Acquisition performance, 3) Control questions, 4) Organisational Changes, 5) Post-acquisition resource redeployment measures and 6) Post-acquisition divestiture measures. The section regarding the post-acquisition divestiture measures (Section 6) and especially the order of the questions and their importance appeared to raise concerns with the reviewers. Thus, after having the items rated their order of how they showed changed. Consequently, the resulting order was: 1) Manufacturing, 2) Distribution, 3) Sales networks, 4) Administration and 5) R&D). Regarding the first page of the survey they felt that there should be a brief synopsis of the survey, a small guideline of how to answer the questions and provide to the respondents reassurance about the confidentiality of all the information obtained.

8.3.2. Empirical Findings and Conclusions from the Structural Model

A *structural equation model* (SEM) was estimated using a number of latent variables to account for asset divestiture, resource redeployment, cost savings, market coverage, innovation capabilities, and post-acquisition performance. This section discusses the main findings and the conclusions derived from the estimation of this model.

The estimation of SEM revealed that the effect of *cost savings* (achieved either from divesting the acquirer's or the target's assets) on post-acquisition performance was negative; Capron (1999) for instance found that cost savings had a lower (compared with the effect of market coverage and innovation capabilities) but still a positive and statistically significant effect on post-acquisition.

Indeed, the negative effect of costs savings on post-acquisition performance constitutes an interesting result given that the basic framework for assessing the importance of an acquisition has been that of cost-based synergies expected to be derived from the deal. The estimation of SEM showed the divestiture of the acquirers' assets does not reduce costs. This outcome might be due to inherent problems of managing a multiproduct firm (Hitt et al 1991a). The requirement to produce synergies in related diversified firms from M&As can impose pressure on the managers (Hitt et al 1994). Obtaining these synergies and in particular those that are inimitable is quite complex and challenging. While in unrelated diversified firms efficient management can be more complicated than originally presumed. The objective of unrelated diversified firms is to achieve financial synergies. These are not easy to obtain due to the loss of strategic control, information asymmetries from operating several diverse businesses and complications from applying financial controls (Hitt et al 1994). Therefore, while some initial gains may be attained with initial product diversification those are likely offset by prolonged diversification further away from the firm's core business (Markides (1992, 1995). Product diversification can therefore have a curvilinear or an inverted U-shaped relationship with firm performance (Hitt et al 1994). According to Lee and Mandhavan (2012), there exist negative synergy theories that can affect the performance impact of a divestiture and these theories include diseconomies of scale and over-diversification, while others find a negative relationship (Bergh, 1995; Montgomery & Thomas, 1988). One explanation of this result might be that the asset divestiture of the acquirer hurts performance instead of enhancing it.

In contrast with the negative effect of cost savings, the estimated model showed the *importance of revenue-based synergies*, achieved through the mediating variables of *market coverage* and *innovation capabilities*; the latter two mediating variables were found to positively affect the long-term corporate performance, in the case of Greek M&As. This finding leads to the conclusion that there are substantial benefits to be exploited in acquisitions, since, in these types of acquisitions, revenues may increase through enhanced market coverage and innovation capability. Contrary however to the empirical finding of Capron (1999), *market coverage* was found to have a weaker

impact on post-acquisition performance than innovation capability, which requires major changes in the way of operating a business and may take longer to translate into actual performance. This weaker impact of market coverage on performance can also be explained by the very small proportion of cross-border acquisitions in the sample (just 20% of the sampled cases). Further, the benefits of revenue enhancement (for corporate performance) can come either from exploiting any of the acquirer's excess resources (resource redeployment to the target) or from acquiring new resources from the target (resource redeployment to the acquiring firm).

Next, the potential cross-effects of asset divestiture and resource redeployment were examined. It was argued that asset divestiture and resource redeployment mutually have intertwined effects on both types of synergies. It was implied that one source of value creation cannot be associated with only one type of post-acquisition activity (cost synergies and resource-based theories). The investigation of potential cross-effects reveals several noteworthy results.

First, asset divestiture has either no, or a positive effect on revenue enhancing capabilities. The effects are asymmetric depending on the recipient of the divestiture measures. The effect of acquirer divestiture on market coverage is negative and insignificant and the same holds for innovation capability. However, the effect of the target divestiture is positive and significant on innovation capability, whereas, the effect of target divestiture on market coverage is negative and insignificant. Those results indicate that the divestiture of the target's assets can help costs and may even enhance innovation capability. These results indicate the difficulties in realizing the gains of post-acquisition divestiture action.

Second, resource redeployment's effect on cost savings was examined. Acquirer's resource redeployment has a positive and significant effect on cost savings and the same holds true for the resource redeployment to the target. These results indicate that resource redeployment not even does not hurt cost but at the same time contributes in achieving higher cost efficiency. One other major implication is that if standalone target divestiture does not improve cost savings, changing the way the target functions through the redeployment of resources to the target facilitate for

further reduced costs. This end result is consistent with earlier empirical work that demonstrates that downsizing is more likely to create value when its scope expands to further than only cutting cost through elimination of slack to include related changes and resource reconfiguration (Anand and Sing, 1997; Nohria and Love, 1996).

Finally, in the case of Greek M&As one cannot associate one source of value creation such as revenue-based synergies with a single type of post-acquisition action like resource redeployment, since asset divestiture (i.e. another type of post-acquisition action) presents revenue-based synergies. In the wake of an acquisition, the divestiture of the target's assets was not normally accompanied by some movement of resources from the acquirer to the target. In other words, the acquirer did not "complete" the task of rationalizing the target's asset, by first cutting any excess assets of the latter and then amend the remaining assets with some complementary resources.

8.3.3. Empirical Findings and Conclusions from the control variables

Tests were conducted to control for the sensitivity of the model's results to potential sources of sample heterogeneity emanating from payment method, target and bidder relative size, acquisition classification, acquisition type, redundancy of senior executives, similarities and organisational performance. The inclusion of all the above control variables did not alter the baseline beta estimates for the effects of *costs savings, market coverage,* and *innovation capabilities* on post-acquisition performance.

However, when the effect of each individual control variable on the basic outcomes of the model is tested separately some interesting results arise. First of all, In Chapter 2 and 3 of the thesis, it was argued that cash-financed deals enhance post-acquisition performance. However, when including **method of payment** in the structural equation model does not change the results of the baseline model, at least when it comes to two of the three mediating variables. The findings indicate that innovation capability is impaired post the acquisition. One reason that this might be the case is that sometimes a greater percentage of the acquirer's capital could have been used to finance the actual acquisition and this can result on a negative impact on the postacquisition performance (Tuch and O'Sullivan, 2007).

Second, including the **relative size** as a control variable in the structural model produced negative insignificant results on the three mediating variables. This result can be due to the majority of the targets being relatively small compared to their acquirers and therefore restructuring the target may have been deemed unnecessary or of limited input to value creation (Capron, 1999).

Third, when the **classification of the acquisition** (95.7% of the cases were classified as friendly) was taken into account in the structural model the results revealed that it did not affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance. This result might be related to the fact that returns to acquirers involved in hostile acquisitions can be more positive than in friendly or "unopposed" acquisitions (Tuch and O'Sullivan, 2007).

Fourth, it was argued that different degrees of relatedness between the acquirer and the target affect positively the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance. Indeed, the structural model estimates for the effect of *market coverage* and *innovation capabilities* are higher than in the case of the baseline model. It was argued that sources of synergy that can create competitive advantage do not only stem from economies of scope but also from similarities in the business lines and resources

Sixth, the statistical analysis revealed that including diversification as a control variable does not affect the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance. As it has been argued, acquisitions usually occur in order to expand business activities and to diversify revenues, but many of those acquisitions later prove to be unsuccessful (Andrade *et al.*, 2001).

Seventh, in respect to the post-acquisition organisational **network changes** it was found that they exert a positive and significant effect on the relationship of cost based synergies and resource enhancement capabilities with post-acquisition performance. It was previously argued in Chapter 2 that interpersonal networks add value (Achrol, 1997) and the Top Management Team's (TMT) network of internal and external affiliations in which a successful firm is rooted can play a significant role to the continuation of its success (Kiessling *et al.*, (2008). Organisational knowledge is considered as one of the most important resources of the organisation (Grant 1996; Kiessling et al., 2008) from a strategic point of view.

Finally, the **retention** (or not) of the target's **top management team** (**TMT**) was examined as a control variable as well. However, the effects of the retention of TMT on the relationship between cost based synergies and resource enhancement capabilities with post-acquisition performance, showed no significant effect.

8.3.4. Implications for Managers

The obvious policy implication from the study's results is that when considering an acquisition, managers should not look at cost-based synergies alone for making their case for a possible target. Revenue-based synergies, achieved through resource redeployment (to the target or the bidder) must be considered as well. Even though, the statistical analysis revealed a negative effect from cost savings and because there is a probability that the sample has affected the results, caution should be exercised when interpreting the relationship in management and decision making. In addition, this outcome can be due to sample characteristics and especially from manufacturing and industry effects. Hence, a direct conclusion here can be that the divestiture of the acquirer's assets should be an action cautiously undertaken by the managers of the acquiring firm. The same conclusion however cannot hold for case of the target's assets, since the process of rationalising the target's business through assets divestiture does lead to systematic cost savings. Thus the management of the acquiring firm should not opt for a joint divestiture of the target's and acquirer's assets, but instead it must solely focus on standalone target divestiture.

Moreover, the results indicate that post-acquisition resource redeployment to both the target and the acquirer improves the revenue-enhancing capabilities of the merged firm. The flow and effectiveness of resource redeployment is bi-directional, signifying the existence of a process of making use of the acquirer's excessive

resources, as well as an investigation process of exploring and acquiring new resources from the target. Thus the target's resources can be leveraged and developed through the acquirer's support structure and systems.

Looking for potential cross-effects of asset divestiture and resource redeployment, the results indicate that one source of value creation cannot be associated with only one type of post-acquisition activity (cost synergies and resource-based theories). It was found that asset divestiture has either no effect, or a positive effect on revenue enhancing capabilities. The effects are asymmetric depending on the recipient of the divestiture measures. The effect of acquirer divestiture on market coverage is negative and insignificant and the same holds for innovation capability. However, the effect of the target divestiture is positive and significant on innovation capability, whereas, the effect of target divestiture on market coverage is negative and insignificant. Those results indicate that the divestiture of the target's assets can help costs and may even enhance innovation capability. Managers should therefore take notice with the difficulties in realizing the gains of post-acquisition divestiture action. Asset divestiture can sometimes deter a company's development (McKinley, 1993). Additionally, after a divestiture, due to the manager's being more conservative because they were reluctant of making innovative decisions as they might be having job security concerns can result to less internal innovation of the firm (Hitt et al. 1996).

In addition, when further potential cross-effects were considered, it was found that resource redeployment's effect on cost savings has a positive and significant effect on both the acquirer's and target's resource redeployment. These results indicate that resource redeployment not even does not hurt cost but at the same time contributes in achieving higher cost efficiency. One other major implication is that if standalone target divestiture does not improve cost savings, changing the way the target functions through the redeployment of resources to the target facilitate for further reduced costs. This end result is consistent with earlier empirical work that demonstrates that downsizing is more likely to create value when its scope expands to further than only cutting cost through elimination of slack to include related changes and resource reconfiguration (Anand and Sing, 1997; Nohria and Love, 1996).

8.4. Research Limitations and Direction for Further Research

In this section the research limitation of the study are presented along with suggestion for further research.

8.4.1. Research Limitations

It is essential at this stage to mention that even though this represents a framework of prospective research on post-acquisition performance, the findings should be construed in accordance with some limitations indicating directions for future research.

The first limitation relates to a small sample size (136 cases). Despite the fact that rules of thumb regarding minimum SEM approach sample sizes were met, only 310 M&A deals were identified in the time frame observed (2005-2009). This represents a reasonable response rate of 44%.

Another limitation emanates from the cross-sectional nature of the study; any crosssectional study does not allow the researcher to examine the dynamic interplay among the variables under consideration, i.e. the researcher cannot study how the variation of variables over time affects the relationship among them. Nevertheless, this was mitigated through the use of the SEM approach.

In addition, this thesis relies on data provided from managers in Greek firms, so the generalisation of the findings might be limited. In relation to this, the web survey questionnaire was completed by a single manager (key informant) from the acquiring company. Therefore, the key informant approach requires careful consideration of certain issues in order to reduce potential measurement error. Also, as reliability is linked to the informant's hierarchical position and tenure, informants in high hierarchical positions with a longer tenure are more reliable (Homburg et al. 2012). Consequently, the Managing Directors or the Chief Executive officers of the firms in our sample were targeted as the most knowledgeable informants. While, that might be true, at the same time choosing acquirers from one country, apart from contacting

a country specific study, it was an intentional approach of dealing with inconsistency of firm's backgrounds. Also, it has to be recognised that selection of the sample was directed by pragmatic reasoning established on time and cost constraints.

Likewise, since the majority of companies in the sample came from two industries, the *manufacturing* industry (26%), and the *finance and insurance* industry (24%), any conclusions derived from the empirical findings should be applied with caution to M&A cases outside these two industries. This however should be of no great concern, since the aforementioned sectors dominated the field of Greek M&As in the previous years.

8.4.2. Direction for Further Research

A quite interesting research issue would to be to contrast the results across studies that employed different measures of post-acquisition performance. For example, a comparison can be made between subjective measures of corporate performance and market measures of corporate performance. In addition, further research could focus on the effect of the type of resources redeployed, as well as on the scope of the redeployment, that is, whether it was unilateral or bilateral.

Furthermore because of the negative effect of cost saving on post-acquisition performance, it would be interesting to include in the theoretical framework negative synergy theories that can affect the performance impact of a divestiture, that comprise diseconomies of scale and over-diversification.

Finally, further research can concentrate on further moderating variables to try to interpret the relationship between asset divestiture and post-acquisition performance. For example, to include moderating conditions to capture industry effects that are present in one industry and not in another. This moderating variable can examine industry effects of post-acquisition performance and even different types of acquisition. Also, differences in divestiture performance may be related to the network and alliance structures of the firms divesting their business units. In addition research that has been done specific action in resource markets, factor markets, market entry via M&A or alliances.

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I. APPENDIX I

Figure I.1: Questionnaire (English version)

Divesting Assets and Redeploying Resources
1.
This is a national multi-industry survey, which seeks to determine how the acquisition performance was affected through asset diversification and resource redeployment.
Your cooperation in completing the questionnaire is central to the success of this research project. In order to assist us please answer all of the questions as fully and honestly as possible. Please note there are no "right" or "wrong" answers to any of the questions; it is your initial impression and response that we are looking for.
ALL THE INFORMATION PROVIDED IN THIS QUESTIONNAIRE WILL REMAIN CONFIDENTIAL AND ONLY BE SEEN BY THE ACADEMIC RESEARCHERS INVOLVED IN THIS STUDY
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2. Firm Details

*1. Please state the firm's name

*2. Please indicate the firm's home country

* 3. Please indicate the approximate number of full time employees in the firm (for the year 2009)

*4. Please indicate the year the merger or the acquisition took place

5. Please indicate the merged or acquired firm's name

*6. The following sections deals with the effects of the acquisition on performance. Please complete EITHER SECTION A OR SECTION B

Complete Section A if the acquired business has continued to operate mainly on a stand-alone basis.

Complete Section B if the acquired business has been substantially integrated into your existing business.

C Complete Section A if the acquired business has continued to operate mainly on a stand-alone basis.

C Complete Section B if the acquired business has been substantially integrated into your existing business.

3. SECTION A

Please complete SECTION A only if the acquired business has continued to operate mainly on a stand-alone basis. If that is not the case please go back and choose SECTION B.

*7. Using the following rating scale, what has been the impact of the acquisition on the position of the acquired business in terms of:

	NEGATIVE	SOMEWHAT NEGATIVE	NEUTRAL	SOMEWHAT POSITIVE	POSITIVE
R&D capabilities	с	с	С	с	С
Design cycle (shortening of the cycle of Innovation/manufacturing/time to market)	C	C	C	С	C
Product costs	С	C	C	С	с
Input Prices	C	C	с	с	C
Broadening of product line	С	C	С	с	с
Geographical coverage	С	C	C	С	С

*8. and of your existing business in terms of:

	NEGATIVE	SOMEWHAT NEGATIVE	NEUTRAL	SOMEWHAT POSITIVE	POSITIVE
R&D capabilities	С	с	С	С	С
Design cycle (shortening of the cycle of innovation/manufacturing/time to market	С	C	C	с	C
Product costs	С	C	C	С	C
Input Prices	C	С	C	0	C
Broadening of product line	С	C	C	с	C
Geographical coverage	C	C	C	0	C

*9. Since the acquisition, how have the market share, sales and profitability of the acquired business changed in terms of:

	SIGNIFICANT DECLINE	SOME	NO CHANGE	SOME INCREASE	SIGNIFICANT
Market share	C	C	С	C	с
Sales	C	C	C	C	0
Intrinsic profitability (EBITDA/Capital Employed)	С	C	C	с	с
Profitability relative to industry average	0	C	C	C	C

* 10. and of your existing business in terms of:

	SIGNIFICANT DECLINE	SOME	NO CHANGE	SOME INCREASE	SIGNIFICANT INCREASE
Market share	с	С	С	с	С
Sales	C	C	C	с	С
intrinsic profitability (EBITDA/Capital Employed)	с	С	с	с	с
Profitability relative to industry average	c	C	C	C	с

4. SECTION B

Please complete SECTION B only if the acquired business has been substantially integrated into your existing business. If that is not the case please go back and choose SECTION A.

*11. What has been the impact of the acquisition on the position of the consolidated business in terms of?

	NEGATIVE	SOMEWHAT NEGATIVE	NEUTRAL	SOMEWHAT POSITIVE	POSITIVE
R&D capabilities	С	С	С	С	С
Design cycle (shortening of the cycle of innovation/manufacturing/time to market)	C	C	C	C	o
Product costs	С	C	C	С	с
Input Prices	0	С	C	C	с
Broadening of product line	С	С	C	С	с
Geographical coverage	с	C	C	C	C

*12. Since the acquisition, how have the consolidated business's market share, sales, and profitability changed?

	SIGNIFICANT DECLINE	SOME	NO CHANGE	SOME	SIGNIFICANT INCREASE
Market share	с	C	C	с	с
Sales	C	C	C	0	С
Intrinsic profitability (EBITDA/Capital Employed)	С	С	с	с	С
Profitability relative to industry average	C	C	с	C	C

5. Control Questions

* 13. Please compare your existing business with the acquired business just before the acquisition.

	NOT AT ALL	SOMEWHAT	NEUTRAL	EXTENT	ENTIRELY
Your products/services were similar	с	С	C	C	С
Your technology was similar	С	C	C	C	C
Your geographical markets were similar	С	С	C	С	с
Your customers shared similar characteristics	С	C	C	C	C
You were direct competitors	с	С	C	С	С
Your products/services were complementary	С	C	C	C	C

* 14. Proportion of the acquired business's annual sales relative to your firm's sales before acquisition (in the line of business concerned):

0	<25%	C 25-49%	C 50-74%	C 75-100%	C > 100%

*15. Acquirer's degree of diversification (pre-acquisition):

- Conglomerate diversified into unrelated businesses
- Firm diversified into related businesses
- Firm focused on one main business

* 16. Please indicate the type of payment that was used for the acquisition (cash and/or securities, i.e. equities, bonds etc)

*17. Please indicate the classification of the acquisition (i.e. hostile of friendly)

*18. Please choose one or more from the following reasons for rationalizing the acquisition/ merger. Please use a scale from 1 to 5 where: 1 is the most significant reason and 5 is the least significant reason. (It is not necessary to choose all 5 reasons).

Market share increase	
Geographical expansion	
Expansion in new product lines	
Cost efficiency	
Eliminate/reduce competition	

6. Organizational Changes

* 19. According to your best recollection could you please rate the organizational changes that took place after the acquisition?

	NEGATIVE	SOMEWHAT NEGATIVE	NEUTRAL	SOMEWHAT POSITIVE	POSITIVE	
Post-acquisition organizational network changes	C	С	С	C	С	
Post-acquisition organizational knowledge changes	C	0	0	0	0	
Retention of the acquired firm's management team	0	С	C	C	C	
Formal organizational changes affected from the retention of the acquired firm	C	0	C	o	o	

*20. According to your best recollection could you please indicate how many senior executives (i.e. chairman, President, CFO) were made redundant following the acquisition?

7. Post-acquisition resource redeployment measures

The following comprise questions about the transfer of resources, knowledge, and capabilities across the acquired business and your existing business. Please use the scale below to assess the extent to which people have been collaborating and resources have been transferred.

*21. To what extent have you used resources from the acquired business to assist your existing business?

	NOT AT ALL	TO A SMALL EXTENT	TO SOME EXTENT	TO A LARGE EXTENT	LARGE EXTENT
Use of acquired business's product innovation capabilities	C	C	C	с	с
Use of acquired business's know-how in manufacturing process/ services	C	С	0	C	С
Use of acquired business's marketing expertise	С	С	C	С	С
Use of acquired business's relationship with suppliers	0	C	C	C	C
Use of acquired business's distribution expertise	С	с	с	с	С

* 22. To what extent have you transferred resources from your existing business to assist your acquired business?

	NOT AT ALL	TO A SMALL EXTENT	TO SOME EXTENT	TO A LARGE EXTENT	LARGE EXTENT
Transfer of product innovation capabilities to the acquired business	С	С	С	С	С
Transfer of know-how in manufacturing process/ services to the acquired business	C	0	0	С	C
Transfer of marketing expertise to the acquired business	C	С	С	С	С
Use of your existing business's supplier relations by the acquired business	C	C	0	C	С
Transfer of distribution expertise to the acquired business	с	С	С	С	С

8. Post-acquisition divestiture measures

The following are designed to assess rationalization and restructuring measures that have been implemented as a result of the merger. Please answer the questions with respect to BOTH the acquired business and the divisions or business units of your company that operate in the same industry as the acquired business.

Please provide an ESTIMATE of the proportion of the physical manufacturing facilities or points of services closed or resold, the proportion of the production capacity/ services restructured, and the proportion of manufacturing/ services workforce cut as a result of the merger.

*23. Acquired business

	0-20	21-40	41-60	61-80	81-100
% of physical manufacturing facilities/ points of services closed or resold (as a proportion of total physical manufacturing facilities/points of services)	с	c	с	с	с
% of manufacturing/services workforce cut (as a proportion of total manufacturing/services workforce)	C	C	C	C	C
*24. Your existing business					
	0-20	21-40	41-60	61-80	81-100
% of physical manufacturing facilities/ points of services closed or resold (as a proportion of total physical manufacturing facilities/points of services)	с	C	с	с	с
% of manufacturing/services workforce cut (as a proportion of total manufacturing/services workforce)	C	C	C	0	0
Please provide an ESTIMATE of the proportion of the physical distribution facilities closed or resol estructured, and the proportion of the distribution personnel cut as a result of the merger.	id, the pro	portion o	f the dis	tribution	capacity
*25. Acquired business					
	0-20	21-40	41-60	61-80	81-100
% of physical distribution facilities closed or resold (as a proportion of total physical distribution facilities)	с	C	с	С	С
% of distribution personnel cut (as a proportion of total distribution personnel)	С	С	с	С	С
*26. Your existing business					
	0-20	21-40	41-60	61-80	81-100
% of physical distribution facilities closed or resold (as a proportion of total physical distribution facilities)	с	C	с	с	с
% of distribution personnel cut (as a proportion of total distribution personnel)	С	с	с	C	С
Please provide an ESTIMATE of the proportion of the sales networks closed or resold, the proportio	on of the s	ales affe	cted by t	he restru	cturing
f sales networks, and the proportion of the sales personnel cut as a result of the merger.					
If sales networks, and the proportion of the sales personnel cut as a result of the merger. *27. Acquired business					
f sales networks, and the proportion of the sales personnel cut as a result of the merger. *27. Acquired business	0-20	21-40	41-60	61-80	81-100
f sales networks, and the proportion of the sales personnel cut as a result of the merger. *27. Acquired business % of sales networks closed or resold (as a proportion of total sales networks)	0-20 C	21-40 C	41-60 C	61-80 C	81-100 C
If sales networks, and the proportion of the sales personnel cut as a result of the merger.	0-20 C C	21-40 C C	41-60 C C	61-80 C C	81-100 C
A sales networks, and the proportion of the sales personnel cut as a result of the merger. * 27. Acquired business * of sales networks closed or resold (as a proportion of total sales networks) * of sales personnel cut (as a proportion of total sales personnel) * 28. Your existing business	0-20 C	21-40 C C	41-60 C C	61-80 C C	81-100 C
If sales networks, and the proportion of the sales personnel cut as a result of the merger.	0-20 C C 0-20	21-40 C C 21-40	41-60 C C 41-60	61-80 C C 61-80	81-100 C C 81-100
A sales networks, and the proportion of the sales personnel cut as a result of the merger. * 27. Acquired business * of sales networks closed or resold (as a proportion of total sales networks) * of sales personnel cut (as a proportion of total sales personnel) * 28. Your existing business * of sales networks closed or resold (as a proportion of total sales networks)	0-20 C C 0-20 C	21-40 C C 21-40 C	41-60 C C 41-60 C	61-80 C C 61-80 C	81-100 C 81-100 C

9. Post-acquisition divestiture measures

Please provide an ESTIMATE of the proportion of the administrative services closed, the proportion of the administrative personnel affected by the restructuring of administrative services, and the proportion of the administrative personnel cut as a merger.

*29. Acquired business 0-20 21-40 41-60 61-80 81-100 0 0 0 0 0 % of administrative services closed (as a proportion of total administrative services) 0 0 0 0 0 % of administrative personnel cut (as a proportion of total administrative personnel) *30. Your existing business 0-20 21-40 41-60 61-80 81-100 C C C C C % of administrative services closed (as a proportion of total administrative services) % of administrative personnel cut (as a proportion of total administrative personnel) 0 0 0 0 0 Please provide an ESTIMATE of the proportion of the physical R&D facilities closed or resold, the proportion of the R&D personnel affected by the restructuring of R&D facilities, and the proportion of the R&D personnel cut as a result of the merger. *31. Acquired business 0-20 21-40 41-60 61-80 81-100 0 0 0 C C % of physical R&D facilities closed or resold (as a proportion of total physical R&D facilities) 0 0 0 0 0 % of R&D personnel cut (as a proportion of total R&D personnel) *32. Your existing business 0-20 21-40 41-60 61-80 81-100 <u>с с с</u> с С % of physical R&D facilities closed or resold (as a proportion of total physical R&D facilities) 0 0 0 0 0 % of R&D personnel cut (as a proportion of total R&D personnel)

10. Comments and Information

33. Finally, are there any comments you would like to make that you feel may help us to better understand the relationships between asset divestiture and resource redeployment in how they affect acquisition performance? If so, please use this space for this purpose.

*

34. Do you wish to receive a summary of the results of the survey?

C Yes

*35. Please provide us with your name and mailing or e-mail address to dispatch your personal copy of the final report and in order to avoid sending you reminders.

C NO

Name:	
Company:	
Address 1:	
Address 2:	
City/Town:	
State/Province:	
ZIP/Postal Code:	
Country:	
Email Address:	
Phone Number:	

Figure I.2: Questionnaire (Greek version)



2. Στοιχεία Εταιρίας

- * 1. Παρακαλώ αναφέρετε το όνομα της επιχείρησης
- * 2. Παρακαλώ αναφέρετε την έδρα της επιχείρησης

* 3. Παρακαλώ αναφέρετε κατά προσέγγιση τον αριθμό των εργαζομένων πλήρους απασχόλησης στην επιχείρηση (για το έτος 2009)

* 4. Παρακαλώ αναφέρετε το έτος στο οποίο έλαβε χώρα η εξαγορά ή η συγχώνευση

5. Παρακαλώ αναφέρετε το όνομα της εξαγορασθείσας επιχείρησης

* 6. Τα ακόλουθα τμήματα ασχολούνται με τις επιπτώσεις της εξαγοράς στα αποτελέσματα της επιχείρησης. Παρακαλώ επιλέξτε το ΤΜΗΜΑ Α ή το ΤΜΗΜΑ Β για να μεταφερθείτε στην ανάλογη ερώτηση

β Απάντηση στο ΤΜΗΜΑ Α εάν η εξαγορασθείσα επιχείρηση συνεχίζει να λειτουργεί κυρίως σε αυτόνομη βάση.

] Απάντηση στο ΤΜΗΜΑ Β εάν η εξαγορασθείσα εταιρεία έχει ενσωματωθεί ουσιαστικά στην υφιστάμενη επιχείρησή σας.
3. TMHMA A

Παρακαλώ απαντήστε το TMHMA Α εάν η εξαγορασθείσα επιχείρηση συνεχίζει να λειτουργεί κυρίως σε αυτόνομη βάση. Αλλιώς παρακαλώ επιστρέψτε στη προηγούμενη σελίδα και επιλέξτε το TMHMA Β

* 7. Ποιος ήταν ο αντίκτυπος της εξαγοράς για τη θέση της εξαγορασθείσας

επιχείρησης όσον αφορά:

	Αρνητικος αντίκτυπος	αρνητικός	Ούδετερος	Μερικά Θετικός	αντίκτυπος	τραρμόζεται
Δυνατότητες Ε&Α (R&D)	10	jn.	jn.	11	10	In
Σχεδιασμός κύκλου (σύντμηση του κύκλου της καινοτομίας / παραγωγής / χρόνος προώθησης στην αγορά)	jn.	10	Įэ.	Įn.	ŧ0	jo
Κόστος προϊόντος	1	jo.	j -	1	E:	10
Οι τιμές προμηθευτών	Įn	ja:	10	jn -	Jn .	jn.
Διεύρυνση της γραμμής παραγωγής	11	jn.	10	10	ti-	1
Γεωγραφική κάλυψη	ŤΩ	Ē.	Ēn	E.	En .	(iii)

* 8. και της επιχείρησής σας όσον αφορά:

	Αρνητικός αντίκτυπος	Μερικά αρνητικός	Ούδετερος	Μερικά Θετικός	Θετικός αντίκτυπος (Δεν εφαρμόζεται
Δυνατότητες Ε&Α (R&D)	1 11	ja:	11	10	10	10
Σχεδιασμός κύκλου (σύντμηση του κύκλου της καινοταμίας / παραγωγής / χρόνος προώθησης στην αγορά)	łn	1_{ij}	Je.	h.	Įπ	In
Κόστος προϊόντος	(1)	(j)	11	19	E.	10
Οι τιμές προμηθευτών	1 to	ja.	jn.	jn .	ŧ.	In
Διεύρυνση της γραμμής παραγωγής	1 ···	10	11	j.	E.	In
Γεωγραφική κάλυψη	10	jn.	10	ja.	Į.	fn

* 9. Μετά την εξαγορά, πώς έχουν αλλάξει το μερίδιο της αγοράς, οι πωλήσεις και η κερδοφορία της εξαγορασθείσας επιχείρησης;

	Σημαντική Πτώση	Μερική Πτώση	Καμία Αλλαγή	Μερική Αύξηση	Σημαντική Αύξηση	Δεν εφαρμόζεται
Μερίδιο αγοράς	ja.	1.	j.	11	Į.	J=
Πωλήσεις	10	jn.	Ju	jn -	In .	jn.
Εσωτερική κερδοφορία (Κερδή / επενδεδυμένα κεφαλαία)	1 m	jo.	j i	j.	E.	In
Κερδοφορία σε σχέση με το μέσο όρο της αγοράς	in.	jn.	je.	jo -	(c)	In

* 10. και της επιχείρησής σας όσον αφορά:

	Σημαντική Πτώση	Μερική Πτώση	Καμία Αλλαγή	Μερική Αύξηση	Σημαντική Αύξηση	Δεν εφαρμόζεται
Μερίδιο αγοράς	1ª	j:	11	j.	10	-Ja
Πωλήσεις	ţn.	βn	ja -	ja .	Įn.	In
Εσωτερική κερδοφορία (Κερδή / επενδεδυμένα κεφαλαία)	1	jo.	j -	ja .	E.	je.
Αποδοτικότητα σε σχέση με το μέσο όρο της βιομηχανίας	1a	1_{ij}	1n)	\$n	Ju.	In

4. TMHMA B

Παρακαλώ απαντήστε το TMHMA B εάν η εξαγορασθείσα εταιρεία έχει ενσωματωθεί ουσιαστικά στην υφιστάμενη επιχείρησή σας. Αλλιώς παρακαλώ επιστρέψτε στη προηγούμενη σελίδα και επιλέξτε το TMHMA A.

* 11. Ποιος ήταν ο αντίκτυπος της εξαγοράς για τη θέση της ενοποιημένης επιχείρησης;

	Αρνητικός αντίκτυπος	Μερικά αρνητικός	Ούδετερος	Μερικά Θετικός	Θετικός αντίκτυπος σ	Δεν εφαρμόζεται
Δυνατότητες (Ε&Α) Β&D	ja.	j:	j i	j.	Į.	In
Σχεδιασμός κύκλου (σύντμηση του κύκλου της καινοτομίας / παραγωγής / χράνος προώθησης στην αγορά)	ţn	jл	Įη	ţ0	jin .	In
Κάστος προϊόντος	10	10	E)	10	12	Ji.
Οι τιμές προμηθευτών	\$n	ju.	1n	jn -	\$11	jo.
Διεύρυνση της γραμμής παραγωγής	(j.)	(j.)	11	10	(i)	In
Γεωγραφική κάλυψη	1n	jn.	In	p.	Į0	In

* 12. Μετά την εξαγορά, πώς έχουν μεταβληθεί το μερίδιο αγοράς, οι πωλήσεις της ενοποιημένης επιχείρησης, και η αποδοτικότητα;

	Σημαντική Πτώση	Μερική Πιώση	Καμία Αλλαγή	Μερική Αύξηση	Σημαντική Αύξηση	Δεν εφαρμοζεται
Μερίδιο αγοράς	j n	ja:	ja.	j:	ja la	10
Πωλήσεις	jn.	ja -	Jan .	jn -	Jn	In
Εσωτερική κερδοφορία (Κέρδη / επενδεδυμένα κεφαλαία)	<u>j</u> o	10	Į.	10	- fri	J=
Κερδοφορία σε σχέση με το μέσο άρο της αγοράς	j.	ja .	j.	1 n	(m	j-i

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* 13. Ομοιότητες πριν την εξαγορά: Παρακαλώ κάνετε σύγκριση της επιχείρησή σας και της εξαγορασθείσας επιχειρήσης λίγο πριν από την εξαγορά.

			Καθάλου	Μερικώς	Ουδέτερα	Аркета	Απόλυτα	εφαρμόζει
Τα προϊόντα / οι υπη	ιρεσίες σας ήταν παρεμφερε	ыç	1	jo.	1	10	E.	In
Η τεχνολογία σας ήτα	αν παρεμφερής		1n	10	10	\$1.	jn.	jn.
Οι γεωγραφικές αγο	ρές σας ήταν κοινές (σε μεγά	ιλο βαθμό)	ja.	j.	11	10	E.	1
Πελατολόγιο με κοινό	з характърютний		10	jn.	jn.	jo.	10	In
Ήσασταν άμεσοι αντο	τγωνιστές		1n	jn.	10	11	t-	In
Τα προϊόντα / αι υπη	φεσίες σας ήταν συμπληρωμ	ратжа	jn.	jn.	j-r	jo -	\$ n	jn.
		αναλογία των	ετήσιω	ν πωλή	σεωντ		000000	είσας
ETUVEIONODO		τις πωλόσεις	THE STO	osiac			ny sta	ino di
(αναφορικά	με το αντικείμενο	εργασιών πο	ου είναι	παρεμα	ρερές):	anoi	11 - 54	opu
jn <25%	ja 25-49%	50-749	6	10 75	-100%	E.	> 100%	
		2.5		50				
15. Παρακαλ	ώ επιλέξτε τον βα	αθμό διαφορο	ποίηση	ς του α	γοραστ	ή:		
ο Όμιλος εταιρεί	ιών με πολυσχιδείς δραστηρ	ριότητες						
Ε Ομιλος εταιρε	ιών με πολυσχιδείς δραστηρ	ριότητες						
 Θμιλος εταιρε Εταιρεία δρασ 	ών με πολυσχιδείς δραστηρ πηριοποιούμενη σε συναφείς	ριότητες ς δραστηριότητες						
 Ομιλος εταιρεία Εταιρεία δρασ Εταιρεία επικε 16. Παρακαλ 	ιών με πολυσχιδείς δραστηρ πηριοποιούμενη σε συναφείς ντρωμένη σε μία κύρια δρασ είσθε να αναφέρ	ριότητες ς δραστηριότητες στηριότητα τ ετε το είδος τ	ης πληρ	ωμής π	του χρη	σιμοπα	οιήθηκα	τγια
 Ομιλος εταιρεία Εταιρεία δρασ Εταιρεία επικε 16. Παρακαλ την εξαγορά 17. Παρακαλ 	ιών με πολυσχιδείς δραστηρ πηριοποιούμενη σε συναφείς ντρωμένη σε μία κύρια δρασ ιείσθε να αναφέρ (π.χ. σε μετρητά ι είσθε όπως κατα	ριότητες ς δραστηριότητες τηριότητα και / ή λοιπά α] τάξετε την εξα]	ης πληρ ιξιόγρας ιγορά (δ	ωμής π ρα, μετ ηλαδή	του χρη οχές) επιθετικ	σιμοπα τή ή φι	οιήθηκα λική)	τγια
 Ομιλος εταιρεία Εταιρεία δρασ Εταιρεία επικε 16. Παρακαλ την εξαγορά 17. Παρακαλ 18. Παρακαλ 	ών με πολυσχιδείς δραστηρ πηριοποιούμενη σε συναφείς ντρωμένη σε μία κύρια δρασ είσθε να αναφέρ (π.χ. σε μετρητά ι είσθε όπως κατα ώ επιλέξτε μία η 1	ριότητες ς δραστηριότητες πηριοτητα Φετε το είδος τ και / ή λοιπά ς] πάξετε την εξα] περισσότερες	ης πληρ ιξιόγρας ιγορά (δ αιτιολο	ωμής π ρα, μετ ηλαδή : γίες για	του χρη οχές) επιθετικ τ την εξα	σιμοπα τή ή φι	οιήθηκα λική) η την	τγια
 Ομιλος εταιρεία Εταιρεία δρασ Εταιρεία επικε 16. Παρακαλ την εξαγορά 17. Παρακαλ 18. Παρακαλ συγχώνευση 	ών με πολυσχιδείς δραστηρ πριοποιούμενη σε συναφείς ντρωμένη σε μία κύρια δρασ (π.χ. σε μετρητά η είσθε όπως κατα ώ επιλέξτε μία η τ η. Χρησιμοποιήστ	ριότητες ς δραστηριότητες πηριότητα νετε το είδος τ και / ή λοιπά α] πάξετε την εξα] περισσότερες τε τη κλίμακα	ης πληρ εξιόγρας αγορά (δ αιτιολο από 1 έι	ωμής π ρα, μετ ηλαδή γίες για ως 5, ό	του χρη οχές) επιθετικ ι την εξα που: 1 α	σιμοπα κή ή φι ιγορά ι ο πιο σ	οιήθηκα λική) η την ημαντι	ε για κός
 Ομιλος εταιρεία Εταιρεία δρασ Εταιρεία επικε 16. Παρακαλ την εξαγορά 17. Παρακαλ 18. Παρακαλ συγχώνευση παράγοντας 	ών με πολυσχιδείς δραστηρ πριοποιούμενη σε συναφείς ντρωμένη σε μία κύρια δρασ (π.χ. σε μετρητά ι είσθε όπως κατα ώ επιλέξτε μία η τ η. Χρησιμοποιήστ και 5 ο λιγότερο ό	ριάτητες ς δραστηριότητες πηριότητα και / ή λοιπά α] πάξετε την εξα] περισσότερες τε τη κλίμακα σημαντικός. (<i>i</i>	ης πληρ ιξιόγρας ιγορά (δ αιτιολο από 1 ές Δεν απα	ωμής π ρα, μετ ηλαδή γίες για ως 5, ότ ιτείται ι	ιου χρη οχές) επιθετικ την εξα που: 1 α η επιλογ	σιμοπα κή ή φι ιγορά ι ο πιο σ γή και 1	οιήθηκα λική) η την ημαντι ιων 5	ε για κός
 Ομιλος εταιρεία Εταιρεία όροσ Εταιρεία επικε 16. Παρακαλ την εξαγορά 17. Παρακαλ 18. Παρακαλ συγχώνευση παράγοντας αιπιολογιών). 	ών με πολυσχιδείς δραστηρ πριοποιούμενη σε συναφείς ντρωμένη σε μία κύρια δρασ είσθε να αναφέρ (π.χ. σε μετρητά μ είσθε όπως κατα ώ επιλέξτε μια η τ η. Χρησιμοποιήστ και 5 ο λιγότερο σ	οιότητες ς δραστηριότητες τηροτητα τετε το είδος τ και / ἡ λοιπά α] πάξετε την εξα] περισσότερες τε τη κλίμακα σημαντικός. (/	ης πληρ ιξιόγρας ιγορά (δ αιτιολο από 1 έι Δεν απα	ωμής π ρα, μετ ηλαδή γίες για ως 5, ό ιτείται ι	του χρη οχές) επιθετικ τ την εξα που: 1 α η επιλογ	σιμοπα τή ή φι τγοράι ο πιο σ τή και τ	οιήθηκα λική) η την ημαντι ιων 5	ε για κός
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 Ομιλος εταιρεία Εταιρεία δρασ Εταιρεία επικε 16. Παρακαλ την εξαγορά 17. Παρακαλ την εξαγορά 18. Παρακαλ συγχώνευση παράγοντας αιτιολογιών). Αδξηση του μεριδίος αγοράς Γεωγραφκή επέκτασ 	κών με πολωσχιδείς δραστηρ πηριοποιούμενη σε συναφείς ντρωμένη σε μία κύρια δρασ είσθε να αναφέρ (π.χ. σε μετρητά η είσθε όπως κατα ώ επιλέξτε μια η τ η. Χρησιμοποιήστ και 5 ο λιγότερο σ	ριάτητες ς δραστηριότητες πηριοτητα Φετε το είδος τ και / ή λοιπά α] πάξετε την εξα] περισσότερες τε τη κλίμακα σημαντικός. (<i>i</i>	ης πληρ εξιόγρας αγορά (δ αιτιολο από 1 ές Δεν απα	ωμής π ρα, μετ ηλαδή γίες για ως 5, ό ιτείται ι	του χρη οχές) επιθετικ τ την εξα που: 1 α η επιλογ	σιμοπο τή ή φι τγορά ο πιο σ γή και τ	οιήθηκα λική) η την ημαντι rwv 5	ε για κός
 Ομιλος εταιρεία Εταιρεία όρασ Εταιρεία επικε 16. Παρακαλ την εξαγορά 17. Παρακαλ συγχώνευση παράγοντας αιπιολογιών). Αψξηση του μερίδιου αγορος Γεωγραφική επέκτασ Επέκταση σε νέες σε προϊόντων 	κών με πολωσχιδείς δραστηρ πηριοποιούμενη σε συναφείς ντρωμένη σε μία κύρια δρασ (π.χ. σε μετρητά η είσθε όπως κατα ώ επιλέξτε μια η τ η. Χρησιμοποιήστ και 5 ο λιγότερο σ	ριάτητες ς δραστηριότητες πηριοτητα Φετε το είδος τ και / ή λοιπά α] τάξετε την εξα] περισσότερες τε τη κλίμακα σημαντικός. (<i>i</i>	ης πληρ εξιόγρας αγορά (δ αιτιολο από 1 ές Δεν απα	ωμής π ρα, μετ ηλαδή γίες για ως 5, ό ιτείται ι	του χρη οχές) επιθετικ την εξα που: 1 α η επιλογ	σιμοπα τή ή φι τγορά ο πιο σ τή και τ	οιήθηκα λική) η την ημαντι rων 5	ε για κός
 Ομιλος εταιρεία Εταιρεία δρασ Εταιρεία επικε 16. Παρακαλ την εξαγορά 17. Παρακαλ την εξαγορά 18. Παρακαλ συγχώνευση παράγοντας αιτιολογιών). Αύξηση του μεριδίος αγορος Γεωγραφική επέκτασ Επέκταση σε νέες σε προϊόντων Μείωση κόστους 	κών με πολυσχιδείς δραστηρ πριοποιούμενη σε συναφείς ντρωμένη σε μία κύρια δρασ είσθε να αναφέρ (π.χ. σε μετρητά η είσθε όπως κατα ώ επιλέξτε μια η τ η. Χρησιμοποιήστ και 5 ο λιγότερο ή η	ριότητες ς δραστηριότητες πηριότητα Φετε το είδος τ και / ή λοιπά α] πάξετε την εξα] περισσότερες τε τη κλίμακα σημαντικός. (<i>i</i>	ης πληρ ιξιόγρας αγορά (δ αιτιολο από 1 έι Δεν απα	ωμής π ρα, μετ ηλαδή γίες για ως 5, ό ιτείται ι	ιου χρη οχές) επιθετικ ι την εξα που: 1 α η επιλογ	σιμοπα τή ή φι τγορά ι ο πιο σ γή και τ	οιήθηκα λική) η την ημαντι rwv 5	κός

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* 19. Παρακαλείσθε να αξιολογήσετε (αρνητικά ή θετικά) τις οργανωτικές αλλαγές της επιχείρησης μετά την εξαγορά

	Αρνητικός αντίκτυπος	Μερικά αρνητικός	Ουδετερος	Μερικά Θετικός	Θετικός αντίκτυπος σ	Δεν εφαρμόζεται
Οργανωτικές αλλαγές σε επίπεδο δικτύου μετά την εξαγορά	10	10	10	11	1a	P
Οργανωτικές αλλαγές σε επίπεδο τεχνογνωσίας μετά την εξαγορά	jn.	jα.	Ja	je.	jn.	έŋ.
Διατήρηση της διοικητικής ομάδας της εταιρείας που αποκτήθηκε	17	1	1	J.	10	15
Επίσημες οργανωτικές αλλαγές που επηρεόστηκαν από τη διατήρηση της ομάδας διοίκησης της εξαγορασθείσας εταιρείας	In	1 0	} ∩	ţη	Įn.	Įn.

* 20. Παρακαλείσθε να αναφέρετε πόσα ανώτατα στελέχη (π.χ. Πρόεδρος, Διευθύνων Σύμβουλος, Οικονομικός Διευθυντής) έχουν αποχωρήσει από την εταιρεία μετά την εξαγορά

7. Μέτρα ανακατανομής των πόρων μετά την εξαγορά

Οι ακόλουθες ενότητες ερωτήσεων αφορούν τη μεταφορά πόρων, γνώσεων και ικανοτήτων στο σύνολο της εξαγορασθείσας επιχείρησης και της υπάρχουσας επιχείρησή σας. Παρακαλούμε χρησιμοποιήστε την κλίμακα παρακάτω, για να αξιολογήσετε το βαθμό στον οποίο οι άνθρωποι έχουν συνεργαστεί και έχουν δημιουργηθεί συνέργιες σε επίπεδο πόρων της επιχείρησης.

* 21. Σε ποιο βαθμό χρησιμοποιήσατε πόρους από την εξαγορασθείσα επιχείρηση ώστε να βοηθηθεί η υπάρχουσα επιχείρησή σας;

	Καθόλου	Σε μικρό βαθμό	Σε κάποιο βαθμό	Σε αρκετό βαθμό	μεγάλο βαθμό	Δεν εφαρμόζεται
Χρήση των δυνατοτήτων καινοτομίας προϊόντων της εξαγορασθείσας επιχείρησης	10	$\mathbf{j}(\mathbf{j})$	11	12	D.	J.
Χρήση της τεχνογνωσίας στην παραγωγική διαδικασία' στις υπηρεσίες της εξαγορισθείσας επιχείρησης	Įn	1a	jn.	μı.	Ju -	μ
Χρήση της εμπειρίας στο μάρκετινγκ της εξαγορασθείσας επιχείρησης	10	ja .	10	10	10	10
Χρήση των σχέσεων με τους προμηθευτές της εξαγορισθείσας επιχείρησης	ţn.	\mathbf{J}^{α}	In	10	Þ	Jn.
Χρήση της εμπειρίας στη διανομή της εξαγορασθείσας επιχείρησης	10	(j.)	E.	12	ju -	. Fit

* 22. Σε ποιο βαθμό έχετε μεταφέρει πόρους από την υπάρχουσα επιχείρηση για την υποστήριξη της εξαγορασθείσας επιχείρησης;

	Καθόλου	Σε μικρό βαθμό	Σε κάποιο βαθμό	Σε αρκετό βαθμό	μεγάλο ραθμό	Δεν εφαρμόζεται
Μεταφορά των δυνατοτήτων καινοτομίας προϊόντων προς την εξαγορασθείσα επιχείρηση	j :	$\mathbf{J}(t)$	Ţ.	11	Į.	1
Μεταφορά τεχνογνωσίας στη διαδικασία παραγωγής/ στις υπηρεσίες προς την εξαγορασθείσα επιχείρηση	jn.	jn.	In	10	ţ.	J.
Μεταφορά τεχνογνωσίας του μάρκετινγκ προς την εξαγορασθείσα επιχείρηση	11	10	1 th	11	P	1
Χρήση των υφιστάμενων σχέσεων με τους προμηθευτές της επιχείρησής σας από την εξαγορασθείσα επιχείρηση	$\mathbf{I} u$	\mathbf{I}_{ij}	10	P1	Ju	In
Μεταφορά τεχνογνωσίας διανομής προς την εξαγορασθείσα επιχείρηση	- TO	10	This.	Th.	E1	E

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8. Μέτρα αναδιάρθρωσης μετά την συγχώνευση

Τα τμήματα που ακολουθούν αποσκοπούν στην αξιολόγηση των μέτρων εξορθολογισμού και αναδιάρθρωσης που έχουν εφαρμοστεί ως αποτέλεσμα της συγχώνευσης. Παρακαλούμε απαντήστε στις ερωτήσεις με γνώμονα τόσο την εξαγορασθείσα επιχείρηση αλλά και τα τμημάτα ή τις επιχειρηματικές μονάδες της εταιρείας σας που δραστηριοποιούνται στον ίδιο κλάδο, όπως η εξαγοραζόμενη επιχείρηση.

Παρακαλείσθε να δώσετε μια γενική ΑΞΙΟΛΟΓΗΣΗ του ποσοστού των εγκαταστάσεων παραγωγής ή σημείων εξυπηρέτησης που έκλεισαν ή μεταπωλήθηκαν, το ποσοστό της παραγωγικής δυναμικότητας που αναδιαρθρώθηκε, και το ποσοστό της μείωσης του εργατικού δυναμικού ως αποτέλεσμα της συγχώνευσης.

* 23. Στην εξαγορασθείσα επιχείρηση σας

	0-20	21-40	41-60	61-80	81-100	Δεν εφαρμόζεται
% Των εγκαταστάσεων παραγωγής / σημείων εξυπηρέτησης που έκλεισαν ή μεταπώληθηκαν (ως πασαστό του συνόλου των μέσων παραγωγής / σημείων εξυπηρέτησης)	h	10	10	10	11	10
% Της μείωσης του εργατικού δυναμικού (ως ποσοστό του συνόλου του εργατικού δυναμικού)	J.	ţu.	h	$^{\dagger n}$	$_{j:}$	1n
* 24. Στην υπάρχουσα επιχείρησή σας						
	0-20	21-40	41-00	61-60	81-100	Δεν εφαρμόζεται
% Των εγκαταστάσεων παραγωγής / σημείων εξυπηρέτησης που έκλεισαν ή μεταπώληθηκαν (ως ποσοστό των μέσων παραγωγής / σημείων εξυπηρέτησης)	1	Ϊ.	${\bf 1}^{(i)}$	1	1	15
% Της μείωσης του εργατικού δυναμικού (ως ποσοστά του συνόλου του εργατικού δυναμικού)	J	1ª	\mathbf{j}_{1}	\mathbf{j}_{ij}	\mathbf{j}_{2}	1n
Παρακαλείσθε να δώσετε μια γενική ΑΞΙΟΛΟΓΗΣΗ του ποσοστού των εγκαταστάσεων δια του δυναμικού διανομής που αναδιαρθρώθηκε, καθώς και το ποσοστό τη μείωσης του π συγχώνευσης.	σνομής π τροσωτικ	ου έκλειο ού διανο	ταν ή μετ ομής, ως	απωλήθ αποτέλε	ίηκαν, τα αιμα της	ποσοστό
* 25. Στην εξαγορασθείσα επιχείρηση σας						
	0-20	21-40	41-60	61-80	81-100	Δεν εφαρμόζεται
% Των εγκαταστάσεων διανομής που έκλεισαν ή μεταπωλήθηκαν (ως ποσοστό του συνόλου των μέσων διανομής)	10	ţs.	ja.	\mathbf{P}_{i}	1	10
% Της μείωσης του προσωπικού της διανομής (ως ποσοστά του συνάλου του προσωπικού της διανομής)	jo.	₿n.	jn.	jη	$\frac{1}{2}$	J n
* 26. Στην υπάρχουσα επιχείρησή σας						
	0-20	21-40	41-60	61-80	81-100	Δεν εφαρμόζεται
% Των εγκαταστάσεων διανομής που έκλεισαν ή μεταπωλήθηκαν (ως ποσοστό του συνόλου των μέσων διανομής)	10	ja.	j.	j -	11	Þ

Παρακαλείσθε να δώσετε μια γενική ΑΞΙΟΛΟΓΗΣΗ για το ποσοστό του δικτύου πωλήσεων που έκλεισαν ή μεταπωλήθηκαν, το ποσοστό των πωλήσεων που επηρεάσθηκαν από την αναδιάρθρωση των δικτύων πωλήσεων, καθώς και το ποσοστό τη μείωσης του προσωπικού πωλήσεων, ως αποτέλεσμα της συγχώνευσης.

% Της μείωσης του προσωπικού της διανομής (ως ποσοστό του συνόλου του

προσωπικού της διανομής)

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27. Στην εξαγορασθείσα επιχείρηση σας						
	0-20	21-40	41-60	61-80	81-100	Δεν φαρμόζε
% Των δικτύων πωλησης που έκλεισε ή μεταπωλήθηκε (ως ποσοστό του συνόλου των δικτύων πωλήσεων)	Þ.	${\rm Tr}$	j.	j.	11	þ
% μείωσης του προσωτικού πωλήσεων (ως ποσοστό του συνόλου του προσωπικού πωλήσεων)	þ	$\mathbf{j} a$	jn	$\frac{1}{2} (1)$	1n	þ
28. Στην υπάρχουσα επιχείρησή σας						
	0-20	21-40	41-60	61-80	81-100	Δεν φαρμόζ)
% Των δικτύων πωλησης που έκλεισε ή μεταπωλήθηκε (ως ποσοστά του συνόλου των δικτύων πωλήσεων)	Þ.	jo.	10	j-	10	þ
% μείωσης του προσωπικού πωλήσεων (ως ποσοστό του συνόλου του προσωπικού πωλήσεων)	Įn.	ļη	j.	ţη	10	jn.

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 9. Μέτο 	οα αναδιάα	οθοωση	ις μετά τι	1V JUVX	ώνευση
		and a state of the second s		and the second s	

Παρακαλείσθε να δώσετε μια γενική εκτίμηση του ποσοστού των διοικητικών υπηρεσιών που έκλεισαν, το ποσοστό του διοικητικού προσωπικού που επηρεάσθηκε από την αναδιάρθρωση των διοικητικών υπηρεσιών, καθώς και το ποσοστό του διοικητικού προσωπικού που απολύθηκε μετά την συγχώνευση.

* 29. Στην εξαγορασθείσα επιχείρηση σας

	0-20	21-40	41-60	61-80	81-100	εφαρμόζετα
% Των διοικητικών υπηρεσιών που έκλεισαν (ως ποσοστό του συνάλου των	10	E.	1.	10	1.	10
διοικητικών υπηρεσιών)	1.1.2	101		1.0	1.0	
% Της μείωσης του διοικητικού προσωπικού (ως ποσοστό του συνάλου του	in.	E.	in.	to	E.	in.
διοικητικού προσωπικού)	10	100		1	- 2011	12

* 30. Στην υπάρχουσα επιχείρησή σας

	0-20	21-40	41-60	61-80	81-100	Δεν εφαρμόζετα
% Των διοικητικών υπηρεσιών που έκλεισαν (ως ποσοστό του συνάλου των διοικητικών υπηρεσιών)	Ja.	$\left f \right $	$\left(\mathbf{J} \right)$	12	$^{\rm p}$	10
% Της μείωσης του διοικητικού προσωπικού (ως ποσοστό του συνόλου του διοικητικού προσιματικού)	jn	ja.	jn.	ja .	jo.	jn

Παρακαλείσθε να δώσετε μια γενική εκτίμηση του ποσοστού των φυσικών εγκαταστάσεων Ε&Α (R&D) που έκλεισαν ή μεταπωλήθηκαν, το ποσοστό του προσωπικού Ε&Α που επηρεάσθηκε από την αναδιάρθρωση των εγκαταστάσεων E&A, και το ποσοστό της μείωσης του προσωπικού Ε&Α ως αποτέλεσμα της συγχώνευσης.

* 31. Στην εξαγορασθείσα επιχείρηση σας

	0-20	21-40	41-60	61-80	81-100	Δεν εφαρμόζετα
% Των φυσικών εγκαταστάσεων Ε&Α που έκλεισαν ή μεταπωλήθηκαν (ως ποσοστά του συνόλου των φυσικών εγκαταστάσεων Ε&Α)	11	ĵ.	1°	10	11	11
% Της μείωσης του προσωπικού Ε&Α (ως ποσοστό του συνάλου του προσωπικού Ε&Α)	In	\mathbf{j}_{0}	1ϕ	jo	$J \cap$	In
≮ 32. Στην υπάρχουσα επιχείρησή σας						
	0-20	21-40	41-60	61-80	81-100	Δεν εφαρμόζετα
% Των φυσκών εγκαταστάσεων Ε&Α που έκλεισαν ή μεταπωλήθηκαν (ως ποσοστό του συνόλου των φυσκών εγκαταστάσεων Ε&Α)	h	$\frac{1}{2}$	in.	\mathbf{I}_{2}	h	10
% Της μείωσης του προσωπικού Ε&Α (ως ποσοστό του συνάλου του προσωπικού Ε&Α)]n	Įγ	ja.	μ	$j \in$	30

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ατηρέασαν το αποτέλεσμα της εξαγοράς; Εάν ναι, παρακαλούμε να χρησιμοποιήσετε τον παρακάτω χώρο για το σκοπό αυτό.	ων περιουσιακών στοινείω	ν και της ανακατανομής των πόρων και πως αυτές
	πηρέασαν το αποτέλεσμα τ	ης εξανοράς: Εάν ναι, παρακαλούμε να
34. Επιθυμείτε να λάβετε μια περίληψη των αποτελεσμάτων της έρευνας; μ Να μ Να 35. Παρακαλείσθε να μας δώσετε το όνομά σας και την ταχυδρομική ή ηλεκτρονική σας διεύθυνση, ώστε να αποφευχθεί η αποστολή υπενθυμίσεων και για την αποστολή του προσωπικού σας αντιγράφου της τελικής έκθεσης: Ουρατεπώνυμο:		
34. Entileupeire va kabitere pia entipiknjun tuv anorekenjutiruv ting épeuvag; 1/1 1/1 1/1 1/1 1/2 1/1 35. Dapakakalote va pag bakere to okovaja orag kati nju trazubopujknju njuktopovata oraga orazupadovu ting tekliknja čektoraja 26. Dapakakalote va pag bakere to okovaja oraga orazupadovu ting tekliknja čektoraja 27. Jana orazula orazula orazutiva oraga orazupadovu ting tekliknja čektoraja 28. operativavje: 28. operativavje: <t< th=""><th>(pilotpononjoere rov napak</th><th></th></t<>	(pilotpononjoere rov napak	
34. Embupeire va kåßere µa nepikhųn των anorekeguáruov της έρευνας; jn Nor jn Oxo 35. Παρακαλείσθε να µaς δώσετε το όνομά σας και την ταχυδρομική ή ηλεκτρονική σας διεύθυνση, ώστε να αποφευχθεί η αποστολή υπενθυμίσεων και για την αποστολή του προσωπικού σας αντιγράφου της τελικής έκθεσης. Organtenivoup:	61	
	34. Επιθυμείτε να λάβετε μια	περίληψη των αποτελεσμάτων της έρευνας;
35. Παρακαλείσθε να μας δώσετε το όνομά σας και την ταχυδρομική ή ηλεκτρονική σας διεύθυνση, ώστε να αποφευχθεί η αποστολή υπενθυμίσεων και για την αποστολή του προσωπικού σας αντιγράφου της τελικής έκθεσης Ονοματεπίνυμο:	jn Naf	jn Dxr
σας δεύθυνση, ώστε να αποφευχθεί η αποστολή υπενθυμίσεων και για την αποστολή του προσωπικού σας αντιγράφου της τελικής έκθεσης Ονοματεπιώνυμο: Επομεία: Διεύθυνση 2: Πόλη: Νομός Περιφέρετα: Ταχιδρομικός κώδικας: Διεύθυνση επαί!: Ταχιδρομικός κώδικας: Διεύθυνση επαί!: Ταχιδρομικός κώδικας:	35. Παρακαλείσθε να μας δώ	σετε το όνομά σας και την ταχυδρομική ή ηλεκτρονική
αποστολή του προσωπικού σας αντιγράφου της τελικής έκθεσης Ovoparemizvupe: Erapcia: Διεσθυνση 2: Πολη: Νορός Περιφέρεια: Ταχυδρομικός κωθικας: Διεσθυνση email: Διεσθυνση email: Τηλέφωνο:	σας διεύθυνση, ώστε να απο	φευχθεί η αποστολή υπενθυμίσεων και για την
Ovopartemüvupe:	ποστολή του προσωπικού ο	σας αντιγράφου της τελικής έκθεσης
ETaipCia:		
Διεύθυνση 1:	iranecia:	
Διεθέυνση 2: Πολη: Νομός Περιφέρεια: Ταχυδρομικός κώδικας: Διεθέυνση email: Τμλέφωνο:	Διεύθυνση 1:	
Τόλη:	Διεύθυνση 2:	
Νομός Πτριφέρεια:	Ιάλη:	
rσχυδρομικός κώδικας: ώφα: Διεθθυνση email: Γηλέφωνο:	ίομός Περιφέρεια:	
Cαρα:	αχυδρομικός κώδικας:	
Διεύθυνση email: Τηλέφωνο:	Giipa:	
Τηλέφωνο:	Διεύθυνση email:	
	ηλέφωνο:	

II. APPENDIX II

		Esti	S.E.	C.R.	Р
AcquirerDivestAdmin	< Acquirer Divestiture	1 000			
AcquirerDivestSales	<pre>< Acquirer Divestiture</pre>	1 140	103	11.031	***
AcquirerDivestDistrib	<pre>< Acquirer Divestiture</pre>	1.110	129	10.015	***
AcquirerDivestManuf	<pre>< Acquirer Divestiture</pre>	1.272	106	12 013	***
TargetDivestAdmin	<pre>< Target Divestiture</pre>	1.000	.100	12.015	
TargetDivestSales	< Target Divestiture	1.000	088	12,266	***
TargetDivestDistrib	< Target Divestiture	1.077	087	12.938	***
TargetDivestManuf	< Target Divestiture	996	085	11 749	***
TargetRedepDistribExpert	<pre>< Target Redeployment</pre>	1.000	.005	11.7 17	
TargetRedenSuppRelation	< Target Redeployment	953	103	9 260	***
TargetRedepMarketExpert	< Target Redeployment	993	109	9.094	***
TargetRedepKnowhowManuf	<pre>< Target Redeployment</pre>	.857	.111	7.716	***
AcquirerRedepSuppRelation	< Acquirer Redeployment	1.000		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
AcquirerRedepMarketExpert	< Acquirer Redeployment	1.285	.132	9.710	***
AcquirerRedepKnowhowManuf	< Acquirer Redeployment	1.122	.128	8.783	***
AcquirerRedepDistribExpert	< Acquirer Redeployment	1.226	.125	9.776	***
Intrinsinc_Profitaility	< Post- Acquisition_Performance	1.000		21170	
Sales	< Post- Acquisition_Performance	.653	.070	9.354	***
Market_share	< Post- Acquisition_Performance	.485	.064	7.559	***
Relative_Profit	< Post- Acquisition_Performance	.806	.061	13.122	***
Value_RD_Capabilities	< Innovation_Capability	1.000			
Value_Design_Cycle	< Innovation_Capability	.995	.104	9.605	***
Value_Product_Cost	< Cost_Savings	1.000			
Value_Input_Prices	< Cost_Savings	.949	.104	9.120	***
Value_Product_Line	< Market_Coverage	1.000			
Value_Geographic_Coverage	< Market_Coverage	.949	.109	8.720	***

Table II.1: Measurement Model Regression Weights

Table II.2: Standardised Regression Weights Measurement Model

			Estimate
AcquirerDivestAdmin	<	Acquirer_Divestiture	.737
AcquirerDivestSales	<	Acquirer_Divestiture	.897
AcquirerDivestDistrib	<	Acquirer_Divestiture	.824
AcquirerDivestManuf	<	Acquirer_Divestiture	.988
TargetDivestAdmin	<	Target_Divestiture	.776
TargetDivestSales	<	Target_Divestiture	.918
TargetDivestDistrib	<	Target_Divestiture	.958
TargetDivestManuf	<	Target_Divestiture	.889

			Estimate
TargetRedepDistribExpert	<	Target_Redeployment	.746
TargetRedepSuppRelation	<	Target_Redeployment	.819
TargetRedepMarketExpert	<	Target_Redeployment	.802
TargetRedepKnowhowManuf	<	Target_Redeployment	.676
AcquirerRedepSuppRelation	<	Acquirer_Redeployment	.731
AcquirerRedepMarketExpert	<	Acquirer_Redeployment	.852
Acquirer Redep Knowhow Manuf	<	Acquirer_Redeployment	.770
AcquirerRedepDistribExpert	<	Acquirer_Redeployment	.840
Intrinsinc_Profitaility	<	Post-Acquisition_Performance	.932
Sales	<	Post-Acquisition_Performance	.687
Market_share	<	Post-Acquisition_Performance	.597
Relative_Profit	<	Post-Acquisition_Performance	.881
Value_RD_Capabilities	<	Innovation_Capability	.809
Value_Design_Cycle	<	Innovation_Capability	.833
Value_Product_Cost	<	Cost_Savings	.824
Value_Input_Prices	<	Cost_Savings	.797
Value_Product_Line	<	Market_Coverage	.828
Value_Geographic_Coverage	<	Market_Coverage	.786

Table II.3: Construct Validity

	No. of items	CR (>0.7)	AVE (>0.5)	MSV ⁶	ASV ⁷
Cost Savings	2	0.793	0.657	0.566	0.183
Acquirer Divestiture	4	0.923	0.751	0.237	0.055
Target Divestiture	4	0.937	0.788	0.237	0.064
Target Redeployment	4	0.847	0.582	0.129	0.069
Acquirer Redeployment	4	0.876	0.640	0.199	0.064
Post-Acquisition Performance	4	0.863	0.618	0.188	0.059
Innovation Capability	2	0.805	0.674	0.566	0.211
Market Coverage	2	0.789	0.652	0.514	0.191

⁶ Maximum Squared Variance (MSV) should be lower than AVE (MSV<AVE)

⁷ Average Shared Squared Variance (ASV) should be lower than AVE (ASV<AVE)

Cost Saving s	Acquirer Divestiture	Target Divestitur e	Target Redeployme nt	Acquirer Redeploymen t	Post-Acquisition Performance	Innovation Capability	Market Coverage
0.811							
0.003	0.866						
0.023	0.487	0.888					
0.342	0.313	0.243	0.763				
0.323	-0.010	-0.302	-0.011	0.800			
0.207	0.124	0.029	0.226	0.145	0.786		
0.752	0.154	0.143	0.359	0.187	0.434	0.821	
0.672	-0.091	-0.204	0.176	0.446	0.306	0.717	0.807

 Table II.4: Factor Correlation Matrix with square root of the AVE

Table II.5: Correlations and Covariances

			Estimate
Acq Dives	<>	Target Dive	.490
Target Dive	<>	Acq Red	308
Target Red	<>	Acq Red	.050
Acq Dives	<>	Target Red	.319
Acq Dives	<>	Acq Red	017
Target Dive	<>	Target Red	.271

Table II.6: Covariances

	Estimate	S.E.	C.R.	Р
Acq Dives <> Target Dive	.227	.055	4.151	***
Target Dive <> Acq Red	419	.134	-3.130	.002
Target Red <> Acq Red	.057	.113	.505	.614
Acq Dives <> Target Red	.138	.042	3.281	.001
Acq Dives <> Acq Red	009	.047	187	.852
Target Dive <> Target Red	.302	.108	2.808	.005

Table II.7: Squared Multiple Correlations

	Estimate
inn capability	.238
market coverage	.272
Cost_Savings	.247
Performance	.339
Value_Geographic_Coverage	.578
Value_Input_Prices	.642

	Estimate
Sales	.536
Intrinsinc_Profitaility	.372
Relative_Profit	.591
Market_share	.840
Value_Product_Line	.711
Value_RD_Capabilities	.636
Value_Design_Cycle	.725
Value_Product_Cost	.741
AcquirerRedepKnowhowManuf	.585
AcquirerRedepMarketExpert	.729
AcquirerRedepSuppRelation	.550
AcquirerRedepDistribExpert	.726
TargetRedepKnowhowManuf	.452
TargetRedepMarketExpert	.633
TargetRedepSuppRelation	.658
TargetRedepDistribExpert	.603
TargetDivestManuf	.777
TargetDivestDistrib	.913
TargetDivestSales	.854
TargetDivestAdmin	.584
AcquirerDivestManuf	.972
AcquirerDivestDistrib	.686
AcquirerDivestSales	.809
AcquirerDivestAdmin	.547

Table II.8: Regression Weights Measures for Control Structural Model

Descripti on	Dependent Variable	independent Varibles	Unstandardized Estimates		tes	Standar dized Estimat es	
			Estimate	S.E.	C.R.	Р	
		Cost Savings	-0.301	0.168	- 1.793	0.07 3	-0.31
Baseline Model	Performance	Market Cov.	0.345	0.128	2.686	0.00 7	0.374
		Inn. Capability	0.48	0.16	3.012	0.00 3	0.494
Payment	Performance	Cost Savings	-0.23	0.148	- 1.558	0.11 9	-0.245
Method for funding	Performance	Market Cov.	0.351	0.125	2.806	0.00 5	0.387
	Performance	Inn. Capability	0.388	0.132	2.94	0.00 3	0.429

					-		
	inn capability	Payment	-0.23	0.068	3.387	***	-0.282
					-	0.75	
	market coverage	Payment	-0.022	0.07	0.316	2	-0.027
	~ ~ .					0.61	
	Cost_Savings	Payment	0.034	0.066	0.509	1	0.043
	Daufaumanaa	Cost Savings	0.219	0.17	-	0.06	0.226
	renomance		-0.318	0.17	1.0/1	0.00	-0.320
	Performance	Market Cov.	0 366	0 127	2 877	0.00	0 397
	T errormanee	Inn	0.500	0.127	2.077	0.00	0.577
Relative	Performance	Capability	0.479	0.16	3.004	3	0.49
Size						0.92	
	Cost_Savings	Relative Size	-0.005	0.057	-0.09	8	-0.008
						0.27	
	market coverage	Relative Size	0.065	0.06	1.087	7	0.092
						0.93	
	inn capability	Relative Size	0.005	0.056	0.081	6	0.007
	Darformanco	Cost Savings	0.41	0 1 9 1	- 2 265	0.02	0.42
	renomance		-0.41	0.101	2.203	4	-0.42
	Performance	Market Cov.	0 341	0 1 2 9	2 647	0.00	0 379
Acquisiti	renomance	Inn.	0.5 11	0.12)	2.017	0	0.577
on	Performance	Capability	0.572	0.165	3.46	***	0.601
Classifica						0.61	
tion	Cost_Savings	Classification	0.131	0.264	0.497	9	0.042
			0.067	0.000	-		
	market coverage	Classification	-0.065	0.286	0.227	0.82	-0.019
	inn conshility	Classification	0.456	0.265	- 1 710	0.08	0 144
	nin capability	Classification	-0.430	0.203	1./19	0.00	-0.144
	Performance	Cost Savings	-0.499	0.191	2.611	9	-0.499
						0.00	
	Performance	Market Cov.	0.422	0.129	3.26	1	0.46
Dalatada		Inn.					
ess	Performance	Capability	0.607	0.179	3.399	***	0.602
•55	Cost Series	\mathbf{D} 1 \leftarrow 1	0.020	0.07	1 266	0.20	0.110
	Cost_Savings	Relatedness	0.089	0.07	1.200	J	0.119
	market coverage	Relatedness	0.271	0.078	3.471	***	0.333
	inn conchility	Dalata da sas	0.21	0.073	2 802	0.00	0.296
		Relatedness	0.21	0.075	2.095	4	0.280
Diversifi cation	Performance	Cost Savings	-0 322	0 171	1 887	9	-0 333
			0.022	011/1	1.007	0.00	0.000
	Performance	Market Cov.	0.361	0.128	2.816	5	0.397
		Inn.				0.00	
	Performance	Capability	0.486	0.16	3.048	2	0.503
		Diversificatio				0.12	
	Cost_Savings	n	0.115	0.074	1.549	1	0.131
	market coverage	Diversificatio	0.189	0.079	2.401	0.01	0.202
			289				

		n				6	
		Diversificatio				0.08	
	inn capability	n	0.128	0.074	1.732	3	0.145
		Cost Savings			-	0.00	
	Performance	Cost Savings	-0.577	0.195	2.963	3	-0.591
		Market Cov				0.00	
	Performance	Market Cov.	0.384	0.139	2.758	6	0.413
Organisat	D (Inn.	0.602	0 175	2.064	ste ste ste	
ional	Performance	Capability	0.693	0.175	3.964	***	0.721
Changes	Cost Savings	Changes	0 177	0 094	1 88	0.06	0 184
	Cost_buvings	Organisational	0.177	0.074	1.00	0.00	0.104
	market coverage	Changes	0.383	0.103	3.715	***	0.379
	C	Organisational					
	inn capability	Changes	0.404	0.1	4.047	***	0.413
		Cost Savings			-	0.07	
	Performance		-0.298	0.166	1.796	3	-0.306
	5	Market Cov.	0.046	0.400		0.00	
	Performance	_	0.346	0.129	2.692	7	0.372
~ .	D C	Inn.	0.470	0 1 5 2	2 1 2 2	0.00	0.400
Senior Left	Performance	Capability	0.478	0.153	3.133	2	0.492
	inn conchility	Sanian Laft	0.07	0.072	-	0.22	0.001
	nin capability	Senior Lett	-0.07	0.072	0.975	0.33	-0.081
	market coverage	Senior Left	0.013	0.078	0 163	0.07	0.014
	market coverage	Schiol Lett	0.015	0.078	0.105	0.67	0.014
	Cost Savings	Senior Left	0.031	0.074	0.423	2	0.036

III. APPENDIX III

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	2	1.5	3.4	3.4
	Neutral	14	10.3	23.7	27.1
Valid	Somewhat Positive	16	11.8	27.1	54.2
	Positive Impact	27	19.9	45.8	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

R&D capabilities Acquired Business SECTION A

Design cycle Acquired Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	1	.7	1.7	1.7
	Neutral	14	10.3	23.7	25.4
Valid	Somewhat Positive	19	14.0	32.2	57.6
	Positive	25	18.4	42.4	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Product costs Acquired Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Neutral	15	11.0	25.4	25.4
Walid	Somewhat Positive	15	11.0	25.4	50.8
vand	Positive Impact	29	21.3	49.2	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Input Prices Acquired Business SECTION A

-		Frequency	Percent	Valid Percent	Cumulative Percent
	Neutral	12	8.8	20.3	20.3
Walid	Somewhat Positive	19	14.0	32.2	52.5
vand	Positive Impact	28	20.6	47.5	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Broadening of product line Acquired Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Neutral	17	12.5	28.8	28.8
Walid	Somewhat Positive	22	16.2	37.3	66.1
vand	Positive Impact	20	14.7	33.9	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Geographical coverage Acquired Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Neutral	12	8.8	20.3	20.3
V-1:4	Somewhat Positive	10	7.4	16.9	37.3
vanu	Positive Impact	37	27.2	62.7	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

R&D capabilities Existing Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	2	1.5	3.4	3.4
	Neutral	27	19.9	45.8	49.2
Valid	Somewhat Positive	17	12.5	28.8	78.0
	Positive Impact	13	9.6	22.0	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Design cycle Existing Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	1	.7	1.7	1.7
	Neutral	26	19.1	44.1	45.8
Valid	Somewhat Positive	21	15.4	35.6	81.4
	Positive Impact	11	8.1	18.6	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Product costs Existing Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative
					Percent
	Neutral	24	17.6	40.7	40.7
Walid	Somewhat Positive	23	16.9	39.0	79.7
vanu	Positive Impact	12	8.8	20.3	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Input Prices Existing Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	1	.7	1.7	1.7
	Neutral	19	14.0	32.2	33.9
Valid	Somewhat Positive	27	19.9	45.8	79.7
	Positive Impact	12	8.8	20.3	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Broadening of product line Existing Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Neutral	17	12.5	28.8	28.8
Val: 4	Somewhat Positive	26	19.1	44.1	72.9
vand	Positive Impact	16	11.8	27.1	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Geographical Coverage Existing Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Neutral	14	10.3	23.7	23.7
x 7 1· 1	Somewhat Positive	13	9.6	22.0	45.8
vand	Positive Impact	32	23.5	54.2	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Market share Acquired Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Some Decline	2	1.5	3.4	3.4
	No Change	11	8.1	18.6	22.0
Valid	Some Increase	30	22.1	50.8	72.9
	Significant Increase	16	11.8	27.1	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Sales Acquired Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Some Decline	6	4.4	10.2	10.2
	No Change	7	5.1	11.9	22.0
Valid	Some Increase	30	22.1	50.8	72.9
	Significant Increase	16	11.8	27.1	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Intrinsic profitability (Profit/capital employed) Acquired Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative
					Percent
	Significant Decline	1	.7	1.7	1.7
	Some Decline	4	2.9	6.8	8.5
V-1:4	No Change	5	3.7	8.5	16.9
vand	Some Increase	30	22.1	50.8	67.8
	Significant Increase	19	14.0	32.2	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Profitability relative to industry average Acquired Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Significant Decline	1	.7	1.7	1.7
	No Change	10	7.4	16.9	18.6
Valid	Some Increase	40	29.4	67.8	86.4
	Significant Increase	8	5.9	13.6	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Market share Existing Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Some Decline	2	1.5	3.4	3.4
	No Change	15	11.0	25.4	28.8
Valid	Some Increase	34	25.0	57.6	86.4
	Significant Increase	8	5.9	13.6	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Sales Existing Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Some Decline	5	3.7	8.5	8.5
	No Change	12	8.8	20.3	28.8
Valid	Some Increase	36	26.5	61.0	89.8
	Significant Increase	6	4.4	10.2	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Intrinsic profitability (Profit/capital employed) Existing Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Significant Decline	1	.7	1.7	1.7
	Some Decline	7	5.1	11.9	13.6
V-1:4	No Change	9	6.6	15.3	28.8
vand	Some Increase	37	27.2	62.7	91.5
	Significant Increase	5	3.7	8.5	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

Profitability relative to industry average Existing Business SECTION A

		Frequency	Percent	Valid Percent	Cumulative Percent
	Significant Decline	1	.7	1.7	1.7
	Some Decline	3	2.2	5.1	6.8
Walid	No Change	18	13.2	30.5	37.3
vanu	Some Increase	33	24.3	55.9	93.2
	Significant Increase	4	2.9	6.8	100.0
	Total	59	43.4	100.0	
Missing	System	77	56.6		
Total		136	100.0		

R&D capabilities consolidated business SECTION B

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	1	.7	1.3	1.3
	Neutral	25	18.4	32.5	33.8
Valid	Somewhat Positive	26	19.1	33.8	67.5
	Positive Impact	25	18.4	32.5	100.0
	Total	77	56.6	100.0	
Missing	System	59	43.4		
Total		136	100.0		

Design cycle consolidated business SECTION B

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	1	.7	1.3	1.3
	Neutral	25	18.4	32.5	33.8
Valid	Somewhat Positive	25	18.4	32.5	66.2
	Positive	26	19.1	33.8	100.0
	Total	77	56.6	100.0	
Missing	System	59	43.4		
Total		136	100.0		

Product costs consolidated business SECTION B

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	2	1.5	2.6	2.6
	Neutral	18	13.2	23.4	26.0
Valid	Somewhat Positive	31	22.8	40.3	66.2
	Positive Impact	26	19.1	33.8	100.0
	Total	77	56.6	100.0	
Missing	System	59	43.4		
Total		136	100.0		

Input Prices consolidated business SECTION B

		Frequency	Percent	Valid Percent	Cumulative Percent
	Neutral	24	17.6	31.2	31.2
Walid	Somewhat Positive	26	19.1	33.8	64.9
vanu	Positive Impact	27	19.9	35.1	100.0
	Total	77	56.6	100.0	
Missing	System	59	43.4		
Total		136	100.0		

Broadening of product line consolidated business SECTION B

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	1	.7	1.3	1.3
	Neutral	25	18.4	32.5	33.8
Valid	Somewhat Positive	29	20.6	37.6	71.4
	Positive	22	16.2	28.6	100.0
	Total	77	56.6	100.0	
Missing	System	59	43.4		
Total		136	100.0		

Geographical coverage consolidated business SECTION B

		Frequency	Percent	Valid Percent	Cumulative Percent
	Neutral	26	19.1	33.8	33.8
Walid	Somewhat Positive	22	16.2	28.6	62.3
vand	Positive Impact	29	21.3	37.7	100.0
	Total	77	56.6	100.0	
Missing	System	59	43.4		
Total		136	100.0		

Market share Consolidated Business SECTION B

-		Frequency	Percent	Valid Percent	Cumulative Percent
	Some Decline	3	2.2	3.9	3.9
	No Change	9	6.6	11.7	15.6
Valid	Some Increase	45	33.1	58.4	74.0
	Significant Increase	20	14.7	26.0	100.0
	Total	77	56.6	100.0	
Missing	System	59	43.4		
Total		136	100.0		

Sales Consolidated Business SECTION B

		Frequency	Percent	Valid Percent	Cumulative Percent
	Significant Decline	1	.7	1.3	1.3
	Some Decline	5	3.7	6.5	7.8
V-1:4	No Change	11	8.1	14.3	22.1
vand	Some Increase	41	30.1	53.2	75.3
	Significant Increase	19	14.0	24.7	100.0
	Total	77	56.6	100.0	
Missing	System	59	43.4		
Total		136	100.0		

Intrinsic profitability (Profit/capital employed) Consolidated Business SECTION B

		Frequency	Percent	Valid Percent	Cumulative Percent
	Significant Decline	5	3.7	6.5	6.5
	Some Decline	3	2.2	3.9	10.4
V-1:4	No Change	15	11.0	19.5	29.9
vand	Some Increase	42	30.9	54.5	84.4
	Significant Increase	12	8.8	15.6	100.0
	Total	77	56.6	100.0	
Missing	System	59	43.4		
Total		136	100.0		

Profitability relative to industry average	e Consolidated Business SECTION B
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		Frequency	Percent	Valid Percent	Cumulative Percent
	Significant Decline	2	1.5	2.6	2.6
	Some Decline	5	3.7	6.5	9.1
V-1:4	No Change	23	16.9	29.9	39.0
vand	Some Increase	39	28.7	50.6	89.6
	Significant Increase	8	5.9	10.4	100.0
	Total	77	56.6	100.0	
Missing	System	59	43.4		
Total		136	100.0		

Your products/services were similar

_		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	13	9.6	9.6	9.6
	Some	17	12.5	12.5	22.1
x 7 1 1	Neutral	8	5.9	5.9	27.9
vand	A lot	63	46.3	46.3	74.3
	Absolutely	35	25.7	25.7	100.0
	Total	136	100.0	100.0	

Your technology was similar

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	10	7.4	7.4	7.4
	Some	29	21.3	21.3	28.7
Walid	Neutral	21	15.4	15.4	44.1
valid	A lot	54	39.7	39.7	83.8
	Absolutely	22	16.2	16.2	100.0
	Total	136	100.0	100.0	

Your geographical markets were similar

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	18	13.2	13.2	13.2
	Some	19	14.0	14.0	27.2
Valid	Neutral	20	14.7	14.7	41.9
valid	A lot	57	41.9	41.9	83.8
	Absolutely	22	16.2	16.2	100.0
	Total	136	100.0	100.0	

The types of customers to which you sold were similar

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	17	12.5	12.5	12.5
	Some	14	10.3	10.3	22.8
V-1:4	Neutral	15	11.0	11.0	33.8
vand	A lot	69	50.7	50.7	84.6
	Absolutely	21	15.4	15.4	100.0
	Total	136	100.0	100.0	

You were direct competitors

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	37	27.2	27.2	27.2
	Some	19	14.0	14.0	41.2
Valid	Neutral	37	27.2	27.2	68.4
	A lot	27	19.9	19.9	88.2
	Absolutely	16	11.8	11.8	100.0
	Total	136	100.0	100.0	

Your products/services were complementary

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	23	16.9	16.9	16.9
	Some	18	13.2	13.2	30.1
Valid	Neutral	31	22.8	22.8	52.9
	A lot	47	34.6	34.6	87.5
	Absolutely	17	12.5	12.5	100.0
	Total	136	100.0	100.0	

Proportion of the acquired business's annual sales

		Frequency	Percent	Valid Percent	Cumulative Percent
	<25%	82	60.3	60.3	60.3
	25-49%	34	25.0	25.0	85.3
Valid	50-74%	12	8.8	8.8	94.1
	75-100%	4	2.9	2.9	97.1
	>100%	4	2.9	2.9	100.0
	Total	136	100.0	100.0	

Conglomerate diversified into unrelated businesses

_		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	46	33.8	100.0	100.0
Missing	System	90	66.2		
Total	-	136	100.0		

Firm diversified into related businesses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	62	45.6	100.0	100.0
Missing	System	74	54.4		
Total	-	136	100.0		

Firm focused on one main business

-		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	32	23.5	100.0	100.0
Missing	System	104	76.5		
Total		136	100.0		

Type of payment

		Frequency	Percent	Valid Percent	Cumulative
					Percent
	Cash	107	78.7	78.7	78.7
	Cash / Securities	6	4.4	4.4	83.1
Valid	Securities	14	10.3	10.3	93.4
	Securities Exchange	9	6.6	6.6	100.0
	Total	136	100.0	100.0	

Classification of the acquisition

		Frequency	Percent	Valid Percent	Cumulative Percent
	Friendly	130	96.0	96.0	96.3
Valid	Hostile	6	4.0	4.0	100.0
	Total	136	100.0	100.0	

Market share increase (Rationalization)

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	49	36.0	40.5	40.5
	2	29	21.3	24.0	64.5
V-1:4	3	13	9.6	10.7	75.2
vand	4	17	12.5	14.0	89.3
	5	13	9.6	10.7	100.0
	Total	121	89.0	100.0	
Missing	System	15	11.0		
Total		136	100.0		

Geographical expansion (Rationalization)

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	28	20.6	24.1	24.1
	2	15	11.0	12.9	37.1
V-1:4	3	26	19.1	22.4	59.5
vand	4	26	19.1	22.4	81.9
	5	21	15.4	18.1	100.0
	Total	116	85.3	100.0	
Missing	System	20	14.7		
Total		136	100.0		

Expansion in new product lines (Rationalization)

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	22	16.2	18.3	18.3
	2	35	25.7	29.2	47.5
Walid	3	20	14.7	16.7	64.2
v anu	4	21	15.4	17.5	81.7
	5	22	16.2	18.3	100.0
	Total	120	88.2	100.0	
Missing	System	16	11.8		
Total		136	100.0		

Cost efficiency (Rationalization)

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	25	18.4	22.3	22.3
	2	16	11.8	14.3	36.6
V-1:4	3	30	22.1	26.8	63.4
vand	4	28	20.6	25.0	88.4
	5	13	9.6	11.6	100.0
	Total	112	82.4	100.0	
Missing	System	24	17.6		
Total		136	100.0		

Eliminate/reduce competition (Rationalization)

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	11	8.1	10.9	10.9
	2	12	8.8	11.9	22.8
V-1:4	3	26	19.1	25.7	48.5
vand	4	16	11.8	15.8	64.4
	5	36	26.5	35.6	100.0
	Total	101	74.3	100.0	
Missing	System	35	25.7		
Total		136	100.0		

Post-acquisition organizational network changes

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	4	2.9	2.9	2.9
	Neutral	33	24.3	24.3	27.2
Valid	Somewhat Positive	56	41.2	41.2	68.4
	Positive Impact	43	31.6	31.6	100.0
	Total	136	100.0	100.0	

Post-acquisition organizational knowledge changes

		Frequency	Percent	Valid Percent	Cumulative Percent
	Somewhat Negative	3	2.2	2.2	2.2
	Neutral	40	29.4	29.4	31.6
Valid	Somewhat Positive	54	39.7	39.7	71.3
	Positive Impact	39	28.7	28.7	100.0
	Total	136	100.0	100.0	

Retention of the acquired firm's management team

		Frequency	Percent	Valid Percent	Cumulative Percent
	Negative Impact	4	2.9	2.9	2.9
	Somewhat Negative	11	8.1	8.1	11.0
Valid	Neutral	49	36.0	36.0	47.1
v allu	Somewhat Positive	32	23.5	23.5	70.6
	Positive Impact	40	29.4	29.4	100.0
	Total	136	100.0	100.0	

		Frequency	Percent	Valid Percent	Cumulative
					Percent
	Negative Impact	2	1.5	1.5	1.5
	Somewhat Negative	5	3.7	3.7	5.1
Valid	Neutral	59	43.4	43.4	48.5
valid	Somewhat Positive	44	32.4	32.4	80.9
	Positive Impact	26	19.1	19.1	100.0
	Total	136	100.0	100.0	

Senior executives left

		Frequency	Percent	Valid Percent	Cumulative Percent
	0	67	49.3	49.3	49.3
	1	12	8.8	8.8	58.1
	10	1	.7	.7	58.8
	2	16	11.8	11.8	70.6
	3	16	11.8	11.8	82.4
Valid	4	6	4.4	4.4	86.8
	5	9	6.6	6.6	93.4
	6	1	.7	.7	94.1
	7	2	1.5	1.5	95.6
	N/A	6	4.4	4.4	100.0
	Total	136	100.0	100.0	

Use of acquired business's product innovation capabilities

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	31	22.8	22.8	22.8
	Very Little	23	16.9	16.9	39.7
V-1:4	To Some Extent	45	33.1	33.1	72.8
vand	To a Large Extent	25	18.4	18.4	91.2
	To a Very Large Extent	12	8.8	8.8	100.0
	Total	136	100.0	100.0	

Use of acquired business's know-how in manufacturing process/ services

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	26	19.1	19.1	19.1
	Very Little	38	27.9	27.9	47.1
Valid	To Some Extent	38	27.9	27.9	75.0
v and	To a Large Extent	25	18.4	18.4	93.4
	To a Very Large Extent	9	6.6	6.6	100.0
	Total	136	100.0	100.0	

Use of acquired business's marketing expertise

		Frequency	Percent	Valid Percent	Cumulative Percent
					reiceilt
	Not at all	30	22.1	22.1	22.1
	Very Little	38	27.9	27.9	50.0
Valid	To Some Extent	39	28.7	28.7	78.7
vanu	To a Large Extent	23	16.9	16.9	95.6
	To a Very Large Extent	6	4.4	4.4	100.0
	Total	136	100.0	100.0	

Use of acquired business's supplier's relationship

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	19	14.0	14.0	14.0
	Very Little	29	21.3	21.3	35.3
Valid	To Some Extent	49	36.0	36.0	71.3
vand	To a Large Extent	34	25.0	25.0	96.3
	To a Very Large Extent	5	3.7	3.7	100.0
	Total	136	100.0	100.0	

Use of acquired business's distribution expertise

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	24	17.6	17.6	17.6
	Very Little	29	21.3	21.3	39.0
Walid	To Some Extent	36	26.5	26.5	65.4
vanu	To a Large Extent	34	25.0	25.0	90.4
	To a Very Large Extent	13	9.6	9.6	100.0
	Total	136	100.0	100.0	

Transfer of product innovation capabilities to the acquired business

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	24	17.6	17.6	17.6
	Very Little	23	16.9	16.9	34.6
V-1:4	To Some Extent	29	21.3	21.3	55.9
vand	To a Large Extent	38	27.9	27.9	83.8
	To a Very Large Extent	22	16.2	16.2	100.0
	Total	136	100.0	100.0	

Transfer of know-how in manufacturing process/ services to the acquired business

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	23	16.9	16.9	16.9
	Very Little	23	16.9	16.9	33.8
Walid	To Some Extent	19	14.0	14.0	47.8
valid	To a Large Extent	49	36.0	36.0	83.8
	To a Very Large Extent	22	16.2	16.2	100.0
	Total	136	100.0	100.0	

Transfer of marketing expertise to the acquired business

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	23	16.9	16.9	16.9
	Very Little	16	11.8	11.8	28.7
X7.1°.1	To Some Extent	23	16.9	16.9	45.6
vand	To a Large Extent	41	30.1	30.1	75.7
	To a Very Large Extent	33	24.3	24.3	100.0
	Total	136	100.0	100.0	

Use of your existing business's supplier relations by the acquired business

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	16	11.8	11.8	11.8
	Very Little	18	13.2	13.2	25.0
V -1:4	To Some Extent	31	22.8	22.8	47.8
vand	To a Large Extent	40	29.4	29.4	77.2
	To a Very Large Extent	31	22.8	22.8	100.0
	Total	136	100.0	100.0	

Transfer of distribution expertise to the acquired business

		Frequency	Percent	Valid Percent	Cumulative Percent
	Not at all	26	19.1	19.1	19.1
	Very Little	16	11.8	11.8	30.9
Walid	To Some Extent	26	19.1	19.1	50.0
vand	To a Large Extent	42	30.9	30.9	80.9
	To a Very Large Extent	26	19.1	19.1	100.0
	Total	136	100.0	100.0	

% of physical manufacturing facilities/ points of services closed or resold Acquired Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	73	53.7	53.7	53.7
	21-40	24	17.6	17.6	71.3
Valid	41-60	14	10.3	10.3	81.6
v allu	61-80	8	5.9	5.9	87.5
	81-100	17	12.5	12.5	100.0
	Total	136	100.0	100.0	

% of manufacturing/services workforce cut Acquired Business

_		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	74	54.4	54.4	54.4
	21-40	26	19.1	19.1	73.5
V-1:4	41-60	15	11.0	11.0	84.6
vand	61-80	7	5.1	5.1	89.7
	81-100	14	10.3	10.3	100.0
	Total	136	100.0	100.0	

% of physical manufacturing facilities Existing Business

	· · · · · · · · · · · · · · · · · · ·						
		Frequency	Percent	Valid Percent	Cumulative Percent		
	0-20	87	64.0	64.0	64.0		
	21-40	40	29.4	29.4	93.4		
Valid	41-60	7	5.1	5.1	98.5		
	61-80	2	1.5	1.5	100.0		
	Total	136	100.0	100.0			

% of manufacturing/services workforce cut Existing Business

_		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	102	75.0	75.0	75.0
	21-40	30	22.1	22.1	97.1
Valid	41-60	2	1.5	1.5	98.5
	61-80	2	1.5	1.5	100.0
	Total	136	100.0	100.0	

% of physical distribution facilities closed or resold Acquired Business

-		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	63	46.3	46.3	46.3
	21-40	30	22.1	22.1	68.4
V-1:4	41-60	16	11.8	11.8	80.1
vand	61-80	5	3.7	3.7	83.8
	81-100	22	16.2	16.2	100.0
	Total	136	100.0	100.0	

% of distribution personnel cut Acquired Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	63	46.3	46.3	46.3
	21-40	34	25.0	25.0	71.3
V-1:4	41-60	15	11.0	11.0	82.4
vand	61-80	6	4.4	4.4	86.8
	81-100	18	13.2	13.2	100.0
	Total	136	100.0	100.0	

% of physical distribution facilities closed or resold Existing Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	79	58.1	58.1	58.1
	21-40	48	35.3	35.3	93.4
V-1:4	41-60	6	4.4	4.4	97.8
vand	61-80	2	1.5	1.5	99.3
	81-100	1	.7	.7	100.0
	Total	136	100.0	100.0	

% of distribution personnel cut Existing Business Existing Business

				0	
		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	92	67.6	67.6	67.6
	21-40	36	26.5	26.5	94.1
V-1:4	41-60	5	3.7	3.7	97.8
vand	61-80	1	.7	.7	98.5
	81-100	2	1.5	1.5	100.0
	Total	136	100.0	100.0	

% of sales networks closed or resold Acquired Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	62	45.6	45.6	45.6
	21-40	33	24.3	24.3	69.9
V-1:4	41-60	18	13.2	13.2	83.1
vand	61-80	1	.7	.7	83.8
	81-100	22	16.2	16.2	100.0
	Total	136	100.0	100.0	

% of sales personnel cut Acquired Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	65	47.8	47.8	47.8
	21-40	27	19.9	19.9	67.6
V-1:4	41-60	20	14.7	14.7	82.4
vand	61-80	7	5.1	5.1	87.5
	81-100	17	12.5	12.5	100.0
	Total	136	100.0	100.0	

% of sales networks closed or resold Existing Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	84	61.8	61.8	61.8
	21-40	46	33.8	33.8	95.6
Valid	41-60	5	3.7	3.7	99.3
	61-80	1	.7	.7	100.0
	Total	136	100.0	100.0	

% of sales personnel cut Existing Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	101	74.3	74.3	74.3
	21-40	28	20.6	20.6	94.9
Valid	41-60	6	4.4	4.4	99.3
	61-80	1	.7	.7	100.0
	Total	136	100.0	100.0	

% of administrative services closed Acquired Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	57	41.9	41.9	41.9
	21-40	24	17.6	17.6	59.6
V-1:4	41-60	16	11.8	11.8	71.3
Valid	61-80	9	6.6	6.6	77.9
	81-100	30	22.1	22.1	100.0
	Total	136	100.0	100.0	

% of administrative personnel cut Acquired Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	58	42.6	42.6	42.6
	21-40	27	19.9	19.9	62.5
x 7 1· 1	41-60	14	10.3	10.3	72.8
vand	61-80	13	9.6	9.6	82.4
	81-100	24	17.6	17.6	100.0
	Total	136	100.0	100.0	

% of administrative services closed Existing Business

_		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	92	67.6	67.6	67.6
	21-40	38	27.9	27.9	95.6
V-1:4	41-60	4	2.9	2.9	98.5
vand	61-80	1	.7	.7	99.3
	81-100	1	.7	.7	100.0
	Total	136	100.0	100.0	

% of administrative personnel cut Existing Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	100	73.5	73.5	73.5
	21-40	31	22.8	22.8	96.3
Valid	41-60	4	2.9	2.9	99.3
	81-100	1	.7	.7	100.0
	Total	136	100.0	100.0	

% of physical R&D facilities closed or resold Acquired Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	74	54.4	54.4	54.4
	21-40	25	18.4	18.4	72.8
V-1:4	41-60	10	7.4	7.4	80.1
Valid	61-80	3	2.2	2.2	82.4
	81-100	24	17.6	17.6	100.0
	Total	136	100.0	100.0	

% of R&D personnel cut Acquired Business

	-	Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	76	55.9	55.9	55.9
	21-40	24	17.6	17.6	73.5
Walid	41-60	10	7.4	7.4	80.9
vanu	61-80	7	5.1	5.1	86.0
	81-100	19	14.0	14.0	100.0
	Total	136	100.0	100.0	

% of physical R&D facilities closed or resold Existing Business

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20	95	69.9	69.9	69.9
	21-40	34	25.0	25.0	94.9
Valid	41-60	6	4.4	4.4	99.3
	61-80	1	.7	.7	100.0
	Total	136	100.0	100.0	

% of R&D personnel cut Existing Business

_		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-20	102	75.0	75.0	75.0
	21-40	31	22.8	22.8	97.8
	41-60	3	2.2	2.2	100.0
	Total	136	100.0	100.0	

IV. APPENDIX IV

Appendix IV.I

Factor Analysis Unrestricted

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of	.786	
	Approx. Chi-Square	3771.601
Bartlett's Test of Sphericity	df	561
	Sig.	.000

Communalities

	Initial	Extraction
X1: Target Divestiture of Manufacturing	1.000	.826
X2: Target Divestiture of Distribution	1.000	.879
X3: Target Divestiture of Sales	1.000	.842
X4: Target Divestiture of Administration	1.000	.771
X5: Target Divestiture of R&D	1.000	.846
X6: Acquirer Divestiture of Manufacturing	1.000	.907
X7: Acquirer Divestiture of Distribution	1.000	.741
X8: Acquirer Divestiture of Sales	1.000	.849
X9: Acquirer Divestiture of Administration	1.000	.722
X10: Acquirer Divestiture of R&D	1.000	.848
X11: Redep of Target's Product Innovation Capabilities	1.000	.801
X12: Redep of Target's Know-how in Manufacturing	1.000	.676
X13: Redep of Target's Marketing Expertise	1.000	.794
X14: Redepl of Target's Supplier's Relationship	1.000	.795
X15: Redep of Target's Distribution Expertise	1.000	.759
X16: Redep of Acquirer's Product Innovation Capabilities	1.000	.850
X17: Redep of Acquirer's Know-how in Manufacturing	1.000	.795
X18: Redep of Acquirer's Marketing Expertise	1.000	.768
X19: Redep of Acquirer's Supplier Relationship	1.000	.673
X20: Redep of Acquirer's Distribution Expertise	1.000	.743
X21: Organisational Network Changes	1.000	.764
X22: Organisational Knowledge Changes	1.000	.641
X23: Retention of the Management Team	1.000	.662
X24: Formal Organisational Changes	1.000	.814
Y1: R&D Capabilities	1.000	.715
Y2: Design Cycle	1.000	.703
Y3: Product Cost	1.000	.688
Y4: Input Prices	1.000	.695
Y5: Product Line	1.000	.682
Y6: Geographical Coverage	1.000	.694
Y7: Market Share	1.000	.726
Y8:Annual Sales	1.000	.778
Y9: Intrinsic Profitability	1.000	.786
Y10: Relative Profit	1.000	.732

Extraction Method: Principal Component Analysis.

Component	Ir	Initial Eigenvalues		Extra	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of	Cumulative	Total	% of	Cumulative	Total	% of	Cumulative	
	Total	Variance	%	Total	Variance	%	Total	Variance	%	
1	7.617	22.403	22.403	7.617	22.403	22.403	4.360	12.825	12.825	
2	6.622	19.477	41.880	6.622	19.477	41.880	4.171	12.268	25.093	
3	3.009	8.850	50.730	3.009	8.850	50.730	3.840	11.293	36.386	
4	2.308	6.789	57.519	2.308	6.789	57.519	3.643	10.714	47.100	
5	2.209	6.498	64.017	2.209	6.498	64.017	3.315	9.751	56.852	
6	1.651	4.857	68.874	1.651	4.857	68.874	3.305	9.722	66.573	
7	1.546	4.546	73.420	1.546	4.546	73.420	2.116	6.223	72.797	
8	1.003	2.951	76.371	1.003	2.951	76.371	1.215	3.574	76.371	
9	.960	2.824	79.195							
10	.783	2.303	81.498							
11	.670	1.972	83.470							
12	.614	1.806	85.276							
13	.531	1.561	86.837							
14	.465	1.367	88.204							
15	.416	1.224	89.427							
16	.384	1.130	90.557							
17	.369	1.084	91.641							
18	.336	.987	92.629							
19	.323	.949	93.578							
20	.278	.818	94.396							
21	.249	.733	95.129							
22	.216	.634	95.763							
23	.201	.592	96.355							
24	.191	.562	96.917							
25	.163	.481	97.398							
26	.149	.439	97.837							
27	.135	.398	98.235							
28	.120	.354	98.589							
29	.111	.326	98.915							
30	.103	.302	99.217							
31	.086	.254	99.471							
32	.065	.191	99.662							
33	.062	.182	99.844							
34	053	156	100.000							

Total Variance Explained

Extraction Method: Principal Component Analysis.


Component Matrix^a

	Component								
	1	2	3	4	5	6	7	8	
X10: Acquirer Divestiture of R&D	.708		.410						
X1: Target Divestiture of Manufacturing	.679	515							
X6: Acquirer Divestiture of Manufacturing	.665		.483						
X8: Acquirer Divestiture of Sales	.644		.473						
X5: Target Divestiture of R&D	.644	459							
X2: Target Divestiture of Distribution	.643	492							
X11: Redep of Target's Product Innovation Capabilities	.643		362						
X7: Acquirer Divestiture of Distribution	.614								
X3: Target Divestiture of Sales	.613	498							
X9: Acquirer Divestiture of Administration	.592		.359						
X12: Redep of Target's Know-how in Manufacturing	.581			.368					
X13: Redep of Target's Marketing Expertise	.578			.491					
Y1: R&D Capabilities	.574	.361							
X4: Target Divestiture of Administration	.545	464							
Y7: Market Share	.485	.472							
Y3: Product Cost	.470	.406			.422				
Y6: Geographical Coverage		.659							
X20: Redep of Acquirer's Distribution Expertise		.636	.488						
X18: Redep of Acquirer's Marketing Expertise		.630	.528						
X19: Redep of Acquirer's Supplier Relationship		.605	.425						
X16: Redep of Acquirer's Product Innovation Capabilities		.599	.535						
Y4: Input Prices		.563			.365	362			
X22: Organisational Knowledge Changes		.517							
Y2: Design Cycle	.482	.513							
Y5: Product Line	.448	.498							
X21: Organisational Network Changes	.421	.493						.398	
Y8:Annual Sales		.470		384	379				
X17: Redep of Acquirer's Know-how in Manufacturing		.552	.616						
X14: Redepl of Target's Supplier's Relationship	.529			.555					
X15: Redep of Target's Distribution Expertise	.434			.518					
Y9: Intrinsic Profitability	.382	.390		443	413				
Y10: Relative Profit	.415	.412		378	436				
X24: Formal Organisational Changes		.470				.419	524		
X23: Retention of the Management Team		.378				.365	493		

Extraction Method: Principal Component Analysis. a. 8 components extracted.

Rotated Component Matrix^a

	Component							
	1	2	3	4	5	6	7	8
X2: Target Divestiture of Distribution	.879							
X3: Target Divestiture of Sales	.863							
X5: Target Divestiture of R&D	.858							
X4: Target Divestiture of Administration	.847							
X1: Target Divestiture of Manufacturing	.786	.407						
X6: Acquirer Divestiture of Manufacturing		.913						
X8: Acquirer Divestiture of Sales		.885						
X10: Acquirer Divestiture of R&D		.868						
X9: Acquirer Divestiture of Administration		.820						
X7: Acquirer Divestiture of Distribution		.791						
X17: Redep of Acquirer's Know-how in Manufacturing			.868					
X16: Redep of Acquirer's Product Innovation Capabilities			.858					
X18: Redep of Acquirer's Marketing Expertise			.844					
X20: Redep of Acquirer's Distribution Expertise			.805					
X19: Redep of Acquirer's Supplier Relationship			.760					
Y3: Product Cost				.775				
Y2: Design Cycle				.764				
Y4: Input Prices				.757				
Y5: Product Line				.743				
Y1: R&D Capabilities				.726				
Y6: Geographical Coverage				.536				.461
X13: Redep of Target's Marketing Expertise					.821			
X14: Redepl of Target's Supplier's Relationship					.815			
X15: Redep of Target's Distribution Expertise					.791			
X12: Redep of Target's Know-how in Manufacturing					.717			
X11: Redep of Target's Product Innovation Capabilities					.688			
Y9: Intrinsic Profitability						.864		
Y8:Annual Sales						.846		
Y10: Relative Profit						.802		
Y7: Market Share						.764		
X24: Formal Organisational Changes							.858	
X23: Retention of the Management Team							.781	
X22: Organisational Knowledge Changes							.535	.449
X21: Organisational Network Changes							.453	.543

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Component Transformation Matrix

Component	1	2	3	4	5	6	7	8
1	.517	.540	039	.367	.429	.321	.128	.030
2	423	232	.553	.455	.094	.363	.285	.181
3	.089	.536	.681	172	403	174	137	.022
4	361	.210	.131	152	.695	544	.081	.010
5	.480	424	.236	.465	.029	541	154	.002
6	.417	300	.256	554	.134	.082	.580	.052
7	.086	231	.291	263	.377	.373	683	192
8	.059	017	076	114	.039	.003	223	.962

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Appendix IV.II

Factor Analysis 7 Factor Restriction

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measur	.786	
-	Approx. Chi-Square	3771.601
Bartlett's Test of Sphericity	df	561
	Sig.	.000

Communalities

	Initial	Extraction
X1: Target Divestiture of Manufacturing	1.000	.826
X2: Target Divestiture of Distribution	1.000	.869
X3: Target Divestiture of Sales	1.000	.835
X4: Target Divestiture of Administration	1.000	.762
X5: Target Divestiture of R&D	1.000	.846
X6: Acquirer Divestiture of Manufacturing	1.000	.906
X7: Acquirer Divestiture of Distribution	1.000	.741
X8: Acquirer Divestiture of Sales	1.000	.848
X9: Acquirer Divestiture of Administration	1.000	.720
X10: Acquirer Divestiture of R&D	1.000	.843
X11: Redep of Target's Product Innovation Capabilities	1.000	.683
X12: Redep of Target's Know-how in Manufacturing	1.000	.637
X13: Redep of Target's Marketing Expertise	1.000	.782
X14: Redepl of Target's Supplier's Relationship	1.000	.731
X15: Redep of Target's Distribution Expertise	1.000	.651
X16: Redep of Acquirer's Product Innovation Capabilities	1.000	.777
X17: Redep of Acquirer's Know-how in Manufacturing	1.000	.789
X18: Redep of Acquirer's Marketing Expertise	1.000	.764
X19: Redep of Acquirer's Supplier Relationship	1.000	.671
X20: Redep of Acquirer's Distribution Expertise	1.000	.734
X21: Organisational Network Changes	1.000	.606
X22: Organisational Knowledge Changes	1.000	.560
X23: Retention of the Management Team	1.000	.625
X24: Formal Organisational Changes	1.000	.767
Y1: R&D Capabilities	1.000	.682
Y2: Design Cycle	1.000	.687
Y3: Product Cost	1.000	.671
Y4: Input Prices	1.000	.692
Y5: Product Line	1.000	.681
Y6: Geographical Coverage	1.000	.573
Y7: Market Share	1.000	.726
Y8:Annual Sales	1.000	.778
Y9: Intrinsic Profitability	1.000	.777
Y10: Relative Profit	1.000	.721

Extraction Method: Principal Component Analysis.

Component	nponent Initial Eigenvalues			Extra	ction Sums	of Squared	Rotation Sums of Squared				
				Loadi	ngs		Loadings				
	Total	% of	Cumulative	Total	% of	Cumulative	Total	% of	Cumulative		
		Variance	%		Variance	%		Variance	%		
1	7.617	22.403	22.403	7.617	22.403	22.403	4.369	12.851	12.851		
2	6.622	19.477	41.880	6.622	19.477	41.880	4.154	12.218	25.069		
3	3.009	8.850	50.730	3.009	8.850	50.730	3.840	11.295	36.364		
4	2.308	6.789	57.519	2.308	6.789	57.519	3.633	10.684	47.049		
5	2.209	6.498	64.017	2.209	6.498	64.017	3.408	10.023	57.072		
6	1.651	4.857	68.874	1.651	4.857	68.874	3.226	9.489	66.561		
7	1.546	4.546	73.420	1.546	4.546	73.420	2.332	6.859	73.420		
8	1.003	2.951	76.371								
9	.960	2.824	79.195								
10	.783	2.303	81.498								
11	.670	1.972	83.470								
12	.614	1.806	85.276								
13	.531	1.561	86.837								
14	.465	1.367	88.204								
15	.416	1.224	89.427								
16	.384	1.130	90.557								
17	.369	1.084	91.641								
18	.336	.987	92.629								
19	.323	.949	93.578								
20	.278	.818	94.396								
21	.249	.733	95.129								
22	.216	.634	95.763								
23	.201	.592	96.355								
24	.191	.562	96.917								
25	.163	.481	97.398								
26	.149	.439	97.837								
27	.135	.398	98.235								
28	.120	.354	98.589								
29	.111	.326	98.915								
30	.103	.302	99.217								
31	.086	.254	99.471								
32	.065	.191	99.662								
33	.062	.182	99.844								
34	.053	156	100.000								

Total Variance Explained

Extraction Method: Principal Component Analysis.



	Com	oonen	t	-		-	
	1	2	3	4	5	6	7
X10: Acquirer Divestiture of R&D	.708	[Ī	ſ	
X1: Target Divestiture of Manufacturing	.679	515					
X6: Acquirer Divestiture of Manufacturing	.665		.483				
X8: Acquirer Divestiture of Sales	.644		.473				
X5: Target Divestiture of R&D	.644	459					
X2: Target Divestiture of Distribution	.643	492					
X11: Redep of Target's Product	6/3						
Innovation Capabilities	.045						
X7: Acquirer Divestiture of Distribution	.614						
X3: Target Divestiture of Sales	.613	498					
X9: Acquirer Divestiture of Administration	.592						
X12: Redep of Target's Know-how in	581						
Manufacturing	.501						
X13: Redep of Target's Marketing	578			491			
Expertise	.570			. 17 1			
Y1: R&D Capabilities	.574						
X4: Target Divestiture of Administration	.545	464					
Y7: Market Share	.485	.472					
Y3: Product Cost	.470						
Y6: Geographical Coverage		.659					
X20: Redep of Acquirer's Distribution		.636	.488				
Expertise							
X18: Redep of Acquirer's Marketing		.630	.528				
Expertise							
X19: Redep of Acquirer's Supplier		.605					
Relationship							
X16: Redep of Acquirer's Product		.599	.535				
Innovation Capabilities		562					
14: Input Prices		.303					
X22: Organisational Knowledge Changes	100	.317					
12: Design Cycle V5: Product Line	.402	.313					
Y21: Organisational Network Changes	.440	.490					
V8: Appual Sales		.495					
X17. Reden of Acquirer's Know-how in		. + / 0					
Manufacturing		.552	.616				
X14: Redepl of Target's Supplier's							
Relationshin	.529			.555			
X15: Reden of Target's Distribution							
Expertise				.518			
Y9: Intrinsic Profitability				443			
Y10: Relative Profit							
X24: Formal Organisational Changes		.470					524
X23: Retention of the Management Team							- 493

Extraction Method: Principal Component Analysis. a. 7 components extracted.

	Component						
	1	2	3	4	5	6	7
X2: Target Divestiture of Distribution	.874						
X5: Target Divestiture of R&D	.861						
X3: Target Divestiture of Sales	.860						
X4: Target Divestiture of Administration	.845						
X1: Target Divestiture of Manufacturing	.785						
X6: Acquirer Divestiture of Manufacturing		.913					
X8: Acquirer Divestiture of Sales		.884					
X10: Acquirer Divestiture of R&D		.866					
X9: Acquirer Divestiture of Administration		.819					
X7: Acquirer Divestiture of Distribution		.790					
X17: Redep of Acquirer's Know-how in Manufacturing			.863				
X18: Redep of Acquirer's Marketing Expertise			.841				
X16: Redep of Acquirer's Product Innovation Capabilities			.839				
X20: Redep of Acquirer's Distribution Expertise			.814				
X19: Redep of Acquirer's Supplier Relationship			.766				
Y4: Input Prices				.770			
Y3: Product Cost				.758			
Y2: Design Cycle				.752			
Y5: Product Line				.745			
Y1: R&D Capabilities				.703			
Y6: Geographical Coverage				.588			
X13: Redep of Target's Marketing Expertise					.830		
X14: Redepl of Target's Supplier's Relationship					.810		
X15: Redep of Target's Distribution Expertise					.781		
X12: Redep of Target's Know-how in Manufacturing					.733		
X11: Redep of Target's Product Innovation Capabilities					.711		
Y9: Intrinsic Profitability						.859	
Y8:Annual Sales						.846	
Y10: Relative Profit						.794	
Y7: Market Share						.760	
X24: Formal Organisational Changes							.839
X23: Retention of the Management Team							.759
X22: Organisational Knowledge Changes							.638
X21: Organisational Network Changes							.581

Rotated Component Matrix^a

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Component Transformation Matrix

Component	1	2	3	4	5	6	7
1	.516	.537	040	.352	.447	.313	.148
2	425	230	.552	.467	.093	.350	.337
3	.092	.539	.683	157	407	168	130
4	373	.207	.134	158	.686	549	.052
5	.488	426	.236	.460	.035	537	152
6	.400	294	.250	571	.129	.060	.587
7	.091	239	.303	266	.370	.397	691

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.