CRITICAL VARIABLES THAT CONTRIBUTE TO MAXIMIZE A BUSINESS VALUE WHEN FACING A HORIZONTAL ACQUISITION SCENARIO IN THE MONTERREY, MEXICO REGION

THESIS

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To Gabriela:

My favorite person, my support, my lover, my wife

“If the sun refused to shine, I would still be loving you.
When mountains crumble to the sea, there will still be you, and me.”

Jimmy Page / Robert Plant
To Daniel Maranto Vargas, PhD.  For his brilliant inspiration and support to complete this work.

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To Maggie Uribe and Erika Flores.  Your support to make this happen was invaluable.
When one company takes over another and clearly established itself as the new owner, the purchase is called an acquisition. Mergers and acquisitions are happening every day. However, there are not enough studies about how the value of a manufacturing oriented business in the Monterrey area that has been through a horizontal acquisition process can be affected by the acquisition process itself. Even though a new method to gather information is not needed to understand and analyze this problem, the results of the research presented in this thesis show important recommendations that could be useful in the decision making process of a manufacturing oriented business in a horizontal acquisition situation, located in the Monterrey industrial region.

In addition, based on the limitations of the study, and with the objective of making the conclusions and recommendations from this thesis applicable to other industrial regions, and to other businesses sectors, a list of speculations for future research will be addressed.
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1.1 INTRODUCTION

Combining two companies is tough. An acquisition is a tool used by companies for the purpose of expanding their operations often aiming at an increase of their long term profitability. Usually acquisitions occur in a consensual setting where executives from the target company help those from the acquirer in a due diligence process to ensure that the deal is beneficial to both parties.

Historically acquisitions have often failed to add significantly to the value of the acquiring firm's shares (Straub, 2007). Corporate mergers may be aimed at reducing market competition, cutting costs (for example, laying off employees, operating at a more technologically efficient scale, etc.), reducing taxes, removing management, "empire building" by the acquiring managers, or other purposes which may or may not be consistent with public policy or public welfare.

There are different types of acquisitions or mergers. Some of them are:

- **Horizontal acquisitions** take place where the two merging companies manufacture similar products. Because the deal reduces competition in the marketplace, such transactions are heavily regulated by antitrust legislation. The 2002 merger of Hewlett-Packard and Compaq Computer was a horizontal merger, and although there was concern about reduced competition in the high-end computer market, the Federal Trade Commission (FTC) unanimously approved the transaction (Baca, 2009).

- **Vertical acquisitions** occur when two firms, each working at different stages in the buyer-seller relationship or production process join forces. One of the most well-known examples of a vertical merger took place in 2000 when internet provider America Online combined with media conglomerate Time Warner. The merger is considered a vertical one because Time Warner supplied content to consumers through properties like CNN and Time Magazine, while AOL distributed such information via its internet service (Baca, 2009).

- **Congeneric acquisitions** occur where two merging firms are in the same general industry, but they have no mutual buyer/customer or supplier
relationship, such as a merger between a bank and a leasing company. The resultant company should be able to provide more products or services to its customers. One widely cited example of this type of deal is the 1981 merger between Prudential Financial and stock brokerage company Bache & Co. Although both companies were involved in the financial services sector, prior to the deal, Prudential was focused primarily on insurance while Bache dealt with the stock market (Baca, 2009).

- **Conglomerate acquisitions** take place when two companies have no common business but decide to pool resources for some other reason. Procter & Gamble, a consumer goods company, engaged in just such a transaction with its 2005 merger with Gillette. At the time, Procter & Gamble was largely absent from the men’s personal care market, a sector led by Gillette. The companies’ product portfolios were complementary, however, and the merger created one of the world’s biggest consumer product companies. (Baca, 2009).

- **Reverse acquisitions** allows a private company to go public while avoiding the high costs and lengthy regulations associated with an initial public offering. To do this, a private company acquire or merges with an existing public company, which may be a "shell company", installs its own management and takes all the necessary measures to maintain the public listing. For example, portable digital device-maker Handheld Entertainment did this when it purchased Vika Corp in 2006, creating the company known as ZVUE (Baca, 2009).

### 1.2 BACKGROUND

Although they are often uttered in the same breath and used as though they were synonymous, the terms merger and acquisition mean slightly different things.

In the pure sense of the term, a merger or acquisition happens when two firms, often of about the same size, agree to go forward as a single new company rather than remain separately owned and operated. This kind of action is more precisely referred to
as a "merger of equals." Both companies' stocks are surrendered and new company stock is issued in its place.

When one company takes over another and clearly established itself as the new owner, the purchase operation is called an acquisition. From a legal point of view, the target company ceases to exist, the buyer "swallows" the business and the buyer's stock continues to be traded.

An acquisition occurs when by one corporation takes over another entire corporation or a business from an ongoing corporation. The term “horizontal acquisition” describes the acquisition of a business within the same industry.

Within the context of globalization, deregulation, intensification of competitiveness, relaxation of anti-trust legislation, and European Union integration, horizontal mergers and acquisitions have become the dominant mode of firm growth since the nineties up to date. Whereas these acquisitions have played an important role in firm strategy, their contribution to firm performance still remains a controversial issue (Capron L., 1999).

Most acquisitions and mergers are one-time events that companies manage with effort; few companies go through the process often enough to develop a pattern. Thus it tends to be seen not as a process – as something replicable – but only as something to get finished, so everyone can get back to business (Ashkenas, De Monaco, & Francis, 1998). The tendency to see integration as a unique event in an organization's life is magnified by the fact that acquisitions and mergers often are painful and anxiety-producing experiences. They involve job losses, restructured responsibilities, derailed carriers, diminished power, and much else that is stressful. No wonder most managers think about how to get them over with – not how to do them better next time (Ashkenas, De Monaco, & Francis, 1998).
1.3 GENERAL CONCEPTS

The objective of section 1.3 is to explain the definition of basic concepts like acquisitions, mergers, horizontal acquisitions and horizontal acquisitions types. It is worth mentioning at this point that the focus of this thesis is on horizontal acquisitions and this is why, compared with other mergers and acquisition types, more information about horizontal acquisitions is presented.

1.3.1 Acquisitions and Mergers

- **Acquisition**

An acquisition is the taking over of one or more business entities by another. In an acquisition, the parties negotiate how the relative value contributed to the new enterprise will translate into the acquisition price. The traditional reason the acquiring company goes after the target company is to eliminate the competitor and subsequently to give itself more power in the market. A firm may also use Acquisitions and Mergers (A&M) to diversify product lines, expand into new markets and obtain quick control over such things as supply chains, technology or brands. Obviously, the acquiring company is ultimately trying to generate more earnings as well (Dedhia, 2004).

There are two main types of takeover - hostile and friendly (Dedhia, 2004). A hostile takeover occurs when the acquiring company management goes directly to the target company shareholders and offers a price for the deal. A friendly takeover results when acquiring and target companies unite and do the deal, and where the target company’s cost will be different from its fair market value (Dedhia, 2004).

- **Merger**

A merger is the combining of two or more entities through the direct acquisition by one of the net assets of another. Sometimes a new entity results and this is known as a consolidation merger. In a merger, the parties negotiate how the relative value will translate into the amount of ownership
each party will have in the new company. A merger may not require cash as a purchase price. (Dedhia, 2004).

1.3.2 Horizontal Acquisitions

Horizontal mergers and acquisitions involve businesses that operate in the same industry (Capron L., 1998). Acquisitions are an important vehicle for corporate profitability and growth. On the one hand, acquisitions help firms reduce their costs by achieving greater scale (Seth, 1990). On the other hand, they provide a key mechanism by which firms gain access to new resources that produce operating efficiencies and increase revenues by changing the ways in which a firm operates (Chatterjee, 1986; Capron & Mitchell, 1998). Acquisitions tend to dominate simpler contractual exchanges when firms want to obtain tacit and organizationally embedded resources, due both to concerns about opportunistic behavior on the part of exchange partners and to the need for ongoing interaction between the parties in coordinating the exchange of the resources (Nelson & Winter, 1982; Wernerfelt, 1984).

1.3.3 Horizontal Acquisitions types

Acquisitions come in different shapes and sizes. Sometimes, the acquisition is a portfolio or asset purchase that adds volume to a particular business without adding people. Sometimes, it is a consolidating acquisition in which a company is purchased and then consolidated into an existing business. And finally, sometimes the acquisition is a hybrid, parts of which fit into one or more existing businesses while other parts stand alone or become joint ventures (Ashkenas, De Monaco, & Francis, 1998).
1.4 PROBLEM DEFINITION

The problem that is addressed on this research is defined by the following question:

¿In which way do the critical variables that contribute to maximize a horizontal acquisition performance affect the manufacturing oriented businesses located in the Monterrey, Mexico industrial region?

This research problem is integrated by several independent variables and a dependent variable which are:

- **Independent Variables.** Critical variables that contribute to maximize a horizontal acquisition performance in manufacture oriented businesses.
- **Dependent Variable.** Business value.

1.5 RESEARCH OBJECTIVES

The main objective of this research is to understand and explain how the variables that contribute to maximize a horizontal acquisition performance have impacted important manufacturing oriented businesses that have gone through horizontal acquisitions processes, in the Monterrey Mexico industrial region.

In addition, a series of recommendations on how to maximize the business value on businesses that have faced horizontal acquisitions scenarios will be addressed.

This objective will be accomplished through the following activities:

- Investigate the historical key factors and/or variables to accomplish successful business acquisitions in similar industrial fields (horizontal acquisitions). This should be accomplished during the Literature Review section of this thesis.
- Analyze how the critical variables that have an impact on the business value have affected manufacturing oriented businesses in the Monterrey industrial region, using a specific sample of local businesses that have faced horizontal acquisitions scenarios.
Using the information from the critical variables analysis, address a list of recommendations to maximize the business value on business that have faced or will be facing a horizontal acquisition scenario.

1.6 RESEARCH QUESTIONS

With the objective of accomplishing the activities previously listed, the research problem will be exposed through a list of questions, which are:

a) Are the critical variables found in the literature (variables that will define the failure or the success of an acquisition process), that maximize a horizontal acquisition performance, applicable to manufacturing oriented businesses located in the Monterrey industrial region?

b) Which improves the performance of the merging firms the most, the divestiture of the acquirer’s assets or the divestiture of the target’s assets?

c) Which improves the performance of the merging firms the most, the resource redeployment of the acquirer’s resources to the target, or the resource redeployment of the target’s resources to the acquirer?

d) Is there a strategy and/or a methodology that could help to maximize the business value or to minimize losses when businesses face a horizontal acquisition scenario?

1.7 RESEARCH JUSTIFICATION

Between 1984 and 1994 almost 80% of the United States businesses involved in acquisitions had accomplished the expected return over the investment. In the last 10 years, that percentage has been declining, partially due to the collapse of the Internet bubble, economic crisis, but also in part for the lack of management experience in how to deal with acquisitions and mergers (Report, 2008).

In addition, there are not enough studies about how the value of a business in the Monterrey area that has been through a horizontal acquisition process can be affected
by the acquisition process itself. Even though a new method to gather information is not probably needed to understand and analyze this problem, the research results will generate important knowledge that could be similar among horizontal acquisitions in a common industrial region.

1.8 RESEARCH CONTEXT

The research will include several manufacturing oriented businesses that have experienced horizontal acquisitions processes, in the Monterrey industrial region. The way that the research will be made and conducted will be better explained on Chapter 3 of this thesis.

1.9 VARIABLES DEFINITION

The main variables that will be analyzed in this thesis are the ones mentioned on the section 1.3 (Problem Definition) of this chapter, and are the following:

- Independent Variables. Critical variables that contribute to maximize a horizontal acquisition performance.
- Dependent Variable. Business value.

It is worth mentioning that it is really important to analyze and understand the behavior of both types of variables. It is often the case that a lot of effort is invested in analyzing the independent variables and the dependent variable are left unattained and this can reduce the impact of the research’s results (Hernandez & Fernández-Collado, 2006).
1.10 RESEARCH LIMITS

The scope of the research is better covered on Chapter 3, section 3.2, but at this point what can be said is that this investigation is limited to manufacturing oriented business that have been through a horizontal acquisition process and that are located in the Monterrey, Mexico industrial region.
2.1 INTRODUCTION

This chapter discusses relevant literature about acquisitions, and more specifically, horizontal acquisitions and the variables that affect the performance or the value of the businesses involved in a horizontal acquisition process. The information found in this chapter will help to accomplish the investigation research objective and to respond the investigation questions found in Chapter 1.

At the end of this chapter it will be explained how this research contributes to the understanding of acquisition processes.

2.2 VARIABLES THAT AFFECT ACQUISITIONS PERFORMANCE

On section 2.2 variables that affect acquisitions performance are introduced. The objective of this section is to define the variables that latter will support the evaluation of horizontal acquisitions in the Monterrey industrial region.

2.2.1 Value maximizing theories and resource-based view

In the strategy literature, horizontal acquisitions are explained by two main bodies of theory: (1) “value-maximizing theories” and (2) “managerial theories” (Seth, 1990). This thesis focuses on the first perspective, which is rooted in the traditional cost efficiency theory based on the notion of economies of scale and scope, and in the resource-based view base on enhanced utilization of core competencies and resources (Rumelt, 1974; Barney, 1988).

Horizontal acquisitions create value by exploiting cost-based and revenue-based synergies. Synergy exists in an acquisition when the value of the newly-combined firm exceeds the sum of the values of the two merging firms, when acting independently. On the one hand, cost efficiency theories emphasize the role of cost-based synergies that arise when the divestiture of the assets of the merging firms leads to cost savings. On the other hand, the resource-based view of the firm emphasizes the role of revenue-enhancing capabilities. In the study of horizontal acquisitions, they have typically been
seen as a straightforward mechanism for reducing costs through asset divestiture. In addition, cost-based synergies and revenue-based synergies have often been seen as two fundamentally different, and to some degree mutually exclusive, logics. (Capron L., 1999).

Mergers and acquisitions provide an opportunity to trade otherwise non-marketable resources and to buy or sell resources in bundles. Through this vehicle one can, for example, sell an image or buy a combination of technological capabilities and contacts in a given set of markets. As is well known, this is a very imperfect market with few buyers and targets, and yet with a low degree of transparency owing to the heterogeneity of both buyers and targets. A key implication of the latter is that a given target will have different values for different buyers, with particularly big variance among those who can obtain some sort of fit (synergy) between their resources and those of the target (Wernerfelt, 1984).

Because of the extreme difficulties of investigating:

a) what resources a given target has
b) which of those resources the firm can effectively take advantage of
c) what the cost of doing so will be
d) what the firm could pay for them

prospective buyers often limit their search to targets with satisfy certain simple criteria. This criteria is integrated by a resource-based set of acquisition strategies (Salter & Weinhold, 1980) is:

i) related supplementary (get more of those resources you already have)
ii) related complementary (get resources which combine effectively with those you already have).

Other acquisition strategies are more product-oriented and tend to focus on the firm’s ability to enter (and dominate) attractive markets (Wernerfelt, 1984).
2.2.2 Asset Divestiture and Resource Redeployment

Continuing with the “value-maximizing theories” perspective, it is worth mentioning that business acquisitions, resource redeployment, and asset divestiture are elements of a dynamic process in which firms change their business by recombining internal and external resources (Capron, Mitchell, & Swaminathan, 2001).

Both asset divestiture and resource redeployment will play a fundamental roll during the research methodology and data collection stages of this thesis, so it is worth understanding these concepts on detail:

2.2.2.1 Asset Divestiture

The term asset divestiture refers to the extent to which merging firms dispose of their physical assets and cut back their personnel in different areas, including R&D, manufacturing, logistics, sales networks, and administrative services (Capron L., 1999).

2.2.2.2 Resource Redeployment

Resource Redeployment is the extent to which a target or acquiring firm uses the other firm’s resources (R&D capabilities, manufacturing know-how, marketing resources, supplier relationships, and distribution expertise), which may involve physical transfer of resources to new locations or sharing resources without physical transfer (Capron L., 1999).
In Figure 2.1, a summary of the two synergies types that occur during acquisitions, which are fundamental for the development of this thesis, is illustrated.

Note: Numbers refer to a Chapter 2 specific section.
2.4 COST-BASED SYNERGIES

As it is shown on Figure 2.1 (Literature Review Map), there are two main synergy types where the horizontal acquisition performance relies. Synergy exists in an acquisition when the value of the newly-combined firm exceeds the sum of the values of the two merging firms, when acting independently. These two types are the Cost-Based synergies and the Revenue-Based synergies (Capron L., 1999). Section 2.4 covers the Cost-Based synergies.

2.4.1 Post-acquisition asset divestiture and cost-based synergies

Economics literature has traditionally seen horizontal acquisitions as an opportunity to achieve cost savings through the exploitation of economies of scale and scope. Several studies show that asset divestiture, i.e. the elimination of redundant activities and inefficient management practices, improves the performance of horizontal acquisitions (Arndt & Singh, 1997; Tremblay & Tremblay, 1988). Economics of scale and scope are especially useful to predict the performance of horizontal acquisitions, since they are more likely to exist with overlapping businesses that with unrelated acquisitions (O'Shaughnessy & Flanagan, 1998).

The objective of section 2.4.1 is to explain the concepts of cost-based synergies (economies of scale, learning curve economies and economies of scope). These concepts will be addressed during the data collection stage of this thesis.

2.4.1.1 Economies of scale

Economies of scale arise if the merged firm achieves unit cost savings as it increases the scale of a given activity. Production-linked economies of scale are commonly considered as the main driver of cost cutting, but economies of scale may also be achieved in other functional areas of a
business, like R&D, distribution, sales or administrative activities, through the spreading of fixed costs over a higher total volume (Shepherd, 1979).

2.4.1.2 Learning curve economies

In addition, sharing activities can also enable merging firms to obtain cost reduction based on learning curve economies, since each merging business, when acting independently, might not have a sufficiently high level of cumulative volume of production to exploit learning curve economies. Experience curve effects are reinforced when two or more products share a common activity or resource. Any efficiency learned from one product can be applied to the other products. (Capron L., 1999).

With proper instruction and repetition, workers learn to perform their jobs more efficiently and effectively, and consequently, direct labor hours per unit of a product are reduced. (Wisner, 2005).

2.4.1.3 Economies of scope

Economies of scope arise when the merged firm achieves cost savings as it increases the variety of the activities it performs. This is the case when the shared factor of production is imperfectly divisible, so that the manufacture of a subset of goods leaves excess capacity in some stages of production (Panzar & Willig, 1981; Teece, 1982). Horizontal acquisitions commonly increase the scope of the firm and allow spreading the firm’s resources over a broader range of products (Lubatkin, Avisnash, Schulze, & Cotterill, 1998).

A practical example of economies of scope occurs in the manufacturing lines of the motor heads of the Nissan Platina and the Renault Clio. Both heads are the same and since Nissan and Renault formed a merger back in 1999, the heads for both vehicles can be manufactured using the same production line, optimizing costs and eliminating excess capacity (Nissan, 1998).

Horizontal acquisitions provide opportunities for sharing assets characterized by some indivisibility and under-utilized before the acquisition,
while rationalizing two sets of product lines and divesting the less efficient assets (Capron L., 1999).

The exploitation of economies of scale and scope through acquisition is usually achieved through asset divestiture. Capacity divestiture through acquisition may also simultaneously serve a market power objective, as an acquisition represents a way of achieving economies of scale without adding new capacity on the market (Scherer, 1980). In addition, the exploitation of economies of scale through acquisition makes even more economic sense in an industry plagued by overcapacity since the existence of idle assets provides the opportunity for downsizing and rearranging the remaining assets into more efficient recombination. Market power motive often intertwine with scale-based motives of a horizontal acquisition (Dutz, 1989).

2.5 REVENUE-BASED SYNERGIES

Going back to Figure 2.1 (Literature Review Map), the second group of synergies where the horizontal acquisition performance relies are the Revenue-Based synergies which will be covered on section 2.5.

2.5.1 Post-acquisition resource redeployment and revenue-based synergies

Beyond gains from cost cutting, acquisition performance is also influenced by the ability to enhance revenues by accessing complementary resources. The economic logic of capturing revenue-based synergies is often known as sharing complementary resources (or leveraging core competencies, or mobilizing invisible assets). It takes its theoretical roots in the resource-based view of the firm (Penrose, 1959; Wernerfelt, 1984). In this thesis, two ways to increase revenues based on resource redeployment are considered: increased market coverage and enhanced innovation capability.
2.5.1.1 Increased market coverage

Horizontal acquisitions can increase market coverage through the geographic extension of the market and through product line extension (Aaker, 1996; Srivastava, Shervani, & Fahey, 1988). Greater market coverage allow the merged firm to sell existing products (once confined to the particular markets of one firm) to a wider body of consumers, thus enhancing revenues. Shared product lines enable the merging firms to increase the variety of product lines, and eventually to cross-sell and bundle products to customers. The value of these bundles to customer may be greater than the value of each product separately. Product line extension can also enhance revenues if the merged firm manages to exploit the strong reputation of a merging business brand, sales network or marketing activities (Capron & Hulland, 1999). Overall, superior marketing capabilities can lead to increased customer value, which in turn can be translated into premium prices and/or increase volumes (Barney, 1991; Srivastava, Shervani, & Fahey, 1988).

2.5.1.2 Innovation capability

Innovations are an alternative source of customer value (Capron & Hulland, 1999). Horizontal acquisitions can enhance innovation capability by using the superior innovation capability (proprietary technology, patents, know-how) of one of the merged firms to enhance product features (product innovation capability) or to improve organizational and marketing effectiveness (e.g., time to market, customer satisfaction. Innovation capability can be converted into price premium and/or increased volume, leading to higher revenues (Capron L. L, 1999).

The exploitation of revenue-based synergies (increased market coverage and innovation capability) through acquisition is usually achieved through resource redeployment. Such resource redeployment, like the use by a target or acquiring business of the other business’ resources, could take place without the use of an acquisition if the market for resources was efficient.
enough to allow firms to exchange their resources. The market failure argument plays a central role in explaining why firms redeploy resources through acquisitions (Capron L., 1999).

### 2.6 ACQUISITION PERFORMANCE AND BUSINESS VALUE

In order to achieve the research objectives of this thesis and to respond the investigation questions, it is imperative to define the concept of acquisition performance and business value.

The long-term performance of an acquisition is measured by self-reported measures of changes in market shares, sales, intrinsic profitability, and relative profitability compared to industry average since the acquisition (Fornell, Lorange, & Roos, 1990).

To better understand the business value term, it is worth exploring the way that a business is valued. There are three approaches to valuing a business (Jones, 2004):

The first approach is known as the Asset Based Approach. This approach derives an indication of value based on the costs to replace the tangible assets in like-kind condition. If the earnings will not support a value greater than the assets, then at best, the value of a business it the value of its tangible assets.

The second approach is the Market Approach, which derives indications of value using ratios or factors derived from the earnings, sales and/or assets of past transactions of similar businesses. These ratios or factors are then applied to the subject company’s sales, earnings and/or assets to derive an indication of value. Rules of Thumb are also considered to be a Market Approach method; however, Rules of Thumb are dangerous because they are not very specific as to how the conversion factors were derived and at best Rules of Thumb are based on averages. If the subject business is not average, then Rules of Thumb will not properly determine value.

The third approach is the Income Approach. This approach derives indications of value by converting some level of earnings into a value using a capitalization rate,
discount rate or multiple. There are about five Income Approach Methods that appraisers frequently use to obtain indications of value. Each of these methods requires some level of earnings and a conversion factor to convert the earnings into a value. Properly matching the selected level of earnings (pretax, after-tax, discretionary or some form of cash flow) with the correct conversion factor (cap rate, discount rate or multiplier) is the key to obtaining a reasonable and supportable indication of value. If done correctly, each of these methods should produce similar values.

For the purposes of this thesis, cash flow and stock value (if available) will be used to determine the acquisition performance and business value. The periods of time subject to be evaluated, as well as a list of exceptions that will be taken in consideration will be fully explained on the Chapter 3 of this thesis.

Concepts like Cost Based Synergies and Revenue Based Synergies will be the base to support the research presented in this thesis. As explained in this chapter, Cost Based Synergies lead to Asset Divestiture measures, and Revenue Based Synergies lead to Resource Redeployment activities. Understanding how these measures and activities are balanced and executed by businesses involved in horizontal acquisition processes in manufacture-oriented businesses in the Monterrey industrial region, will be a fundamental part of the research stage of this thesis.
3.1 INTRODUCTION

The objective of this chapter is to explain the research methodology and to expose the descriptive statistics of the sample used in this thesis. The research methodology is composed of the following aspects:

- Research scope.
- Hypothesis.
- Research design.
- Sample size.
- Data collection.

3.2 RESEARCH SCOPE

The research project presented in this thesis could be classified as an explicative research, under a quantitative scope. This is because an explicative research goes beyond the description of concepts or phenomena and the establishment of relationships among them (Hernández, Fernández y Baptista 2006). Both of these aspects (the description of the concepts, and the establishment of relationships among them) have already been covered in the existing literature.

3.2.1 Explicative Research.

As its name explains, the main objective of an explicative research is to explain why a phenomenon occurs, and under which conditions it is manifested, or why two or more variables are related. (Hernández, Fernández y Baptista 2006).

3.2.2 Quantitative Scope.

A quantitative scope allows generalizing results in a broader way, compared to a qualitative scope (Hernández, Fernández y Baptista 2006). It facilitates the comparison among similar studies, and most importantly, in a quantitative
research the researcher knows clearly in advance what she/he is looking for, in comparison with the qualitative scope, where the researcher may only know roughly in advance what she/he is looking for. A final useful comparison between quantitative and qualitative scopes is that in a quantitative scope the researcher uses tools, such as questionnaires or equipment to collect numerical data, and in a qualitative scope, the researcher is the data gathering instrument (Hernández, Fernández y Baptista 2006). From this thesis' perspective, based on the literature review, it is already known what to look for, and a questionnaire will be used to gather information. This is why the scope that this thesis will be under is a quantitative one.

As the data presented on Chapter 4 will show, this thesis contains explicative research components. This is because several important acquisition variables will be discussed, and also it will be exposed how these variables could explain the success or the failure of horizontal acquisition processes.

3.3 HYPOTHESES

If the research is an explicative one, then a hypothesis should be proposed. For an explicative research, an explicative hypothesis should be expected.

Based on the information gathered during the Literature Review, the following hypotheses are proposed:

- Asset divestiture:
  Ho. Following a horizontal acquisition, the divestiture of the target’s assets does not improve the performance (cash flow and/or stock value) of the merging firms.
  Hi. Following a horizontal acquisition, the divestiture of the target’s assets improves the performance (cash flow and/or stock value) of the merging firms.
• Resource redeployment:
  Ho. Following a horizontal acquisition, the redeployment in the same proportion of the acquirer’s resources to the target, or vice versa, does not improve the performance (cash flow and/or stock value) of the merging firms.
  Hi. Following a horizontal acquisition, the redeployment in the same proportion of the acquirer’s resources to the target, or vice versa, improves the performance (cash flow and/or stock value) of the merging firms.

3.4 RESEARCH DESIGN

The research design is the plan or strategy that is developed with the purpose of gathering the information needed to accomplish the research objectives (Hernández, Fernández y Baptista 2006).

The research presented in this thesis is non experimental, since it is not pretended to deliberately manipulate variables to understand their effect in other variables. The objective is to analyze how the variables already identified as critical during a horizontal acquisition process, have affected the Monterrey Industrial region businesses.

Among the different types of non experimental research designs, the transactional and longitudinal designs are found (Hernández, Fernández y Baptista 2006). For the research presented in this thesis, a transactional-descriptive design will be used, since the intention is to explore a situation in a specific moment, without analyzing trends or projections in time.

3.5 SAMPLE SIZE

Since the focus group of this thesis is composed of businesses located in the Monterrey industrial region that have concluded horizontal acquisition processes, a non probabilistic sample will be used.
A non probabilistic sample does not require a specific representative of elements, but a careful and controlled selection of subjects, based on certain specific characteristics (Hernández, Fernández y Baptista 2006).

In this thesis, the sample size considered is formed by 10 businesses that as mentioned before, had to be located in the Monterrey industrial region, be manufacturing oriented, and had gone through horizontal acquisition processes.

3.6 DATA COLLECTION

A questionnaire was used to collect detailed primary data related to post-acquisition behavior of large manufacturing firms located in the Monterrey industrial region. Survey data have been used extensively in strategy literature to gather information on post-acquisition processes and performance (Capron 1999).

3.6.1 Survey Participants and Businesses Profile

As mentioned on the previous section, the survey was applied to 10 key employees of large companies located in the Monterrey industrial region, which have been involved in a horizontal acquisition process. Descriptive statistics of the research sample are shown in the following sections and charts:
3.6.2 **Survey Participants by Work Area**

Having a multidisciplinary profile of the participants is important to obtain solid data and most important, to avoid trends or shifts in the results that could be related to a sample with a majority of participants working in a particular department. Figure 3.1 shows the survey participants by work area in a percentage and graphic way.

![Survey Participants by Work Area](image)

*Figure 3.1 Survey Participants by Work Area (Individuals).*
3.6.3 Survey Businesses by Product Types

Figure 3.2 shows how similar or different the products line of acquired and the existing businesses are. In most cases, the acquisition processes took place involving businesses with very similar products. This is a way of showing that the survey was successfully applied to businesses involved in horizontal acquisition processes.

Figure 3.2 Survey Participants by Products Type.
3.6.4 Survey Businesses by Technology and Customer Types

The objective of figures 3.3 and 3.4 is similar to the objective of Figure 3.2. Having a similar technology and similar customer types is an indication of horizontal acquisitions. 6 out of the 10 surveyed businesses had similar technology and similar customer types.

Figure 3.3 Survey Participants by Technology Type.

Figure 3.4 Survey Participants by Customer Types.
3.6.5 **Survey Businesses by Geographical Markets**

Geographic scope helps account for resource transfer and capability improvement following acquisitions. Increasing the market coverage is one of the Revenue Based Synergies desired during an acquisition process and was already discussed on section 2.5.1.1 of this thesis. Multinational targets provide additional sources of value creation by drawing on national differences and diverse environments, while acquired firms present in a foreign country may not provide the same richness of resources (Anand, Capron y Mitchell 2005). The purpose of Figure 3.5 is to show that some of the surveyed businesses could have been looking for increasing their market coverage through a horizontal acquisition. At least 7 out of 10.

![Pie chart showing survey participants by geographical markets](image)

**Figure 3.5 Survey Participants by Geographical Market.**
3.6.6 Survey Businesses by Competitors

Figure 3.6 is related too with the increase market coverage strategy. Acquiring a direct competitor allows the acquiring firm to increase market coverage, independently if the strategy is to do it locally or internationally (Anand, Capron y Mitchell 2005). Acquiring direct competitors is a common practice in horizontal acquisitions (Capron 1999).

![Direct Competitors Pie Chart]

Figure 3.6 Survey Participants by Market Type.
3.6.7 Survey Businesses by Operation After Acquisition

Figure 3.7 shows how many of the surveyed businesses started together as an integrated operation after the horizontal acquisition operation and how many of them stood as an independent operation. Most of the participants (7 out of 10), started as an integrated operation. This is an indicator of pursuing cost based synergies, like Economies of Scale, Learning Curve Economics or Economics of Scope, discussed on section 2.4.1 of this thesis.
3.6.8 Survey Instrument Design

The survey used on this thesis is based in one survey developed by Laurence Capron (Capron 1999). This survey was developed specifying measurement scales by reviewing relevant literature and by completing 25 on-site interviews with CEOs from large firms, academicians and consultants and by pre-testing the resulting scales with a group of academics and consultants (Capron 1999). In addition, the Capron’s research instrument was translated to Spanish and reviewed by some of the surveyed individuals before been applied to the rest of them, to verify if the translation made sense and also to understand if the survey really included the most of the variables involved during a horizontal acquisition process.

The complete survey, translated to English can be found on Appendix 1.

3.7 Conclusion

In general, what could be concluded from this chapter, once that the hypotheses were proposed, is that the selected businesses sample is composed by businesses that went through horizontal acquisitions processes, since most of them had similar product types, similar technology, similar customer types and similar geographical markets.

Chapter IV of this thesis will use the information collected in the surveys to accept or reject the hypothesis proposed in this chapter.
4.1 INTRODUCTION

This chapter reports the analysis of the collected information and an interpretation of the results of this analysis. Both, the data analysis and the results interpretation will be used to answer the research questions previously proposed on section 1.6 of Chapter I of this thesis (General Expositions).

4.2 STUDY GROUPS

The first significant finding was that the businesses included in the survey are divided in two groups. The first group, that for further analysis purposes will be named Group 1, is integrated by the businesses where they stock value and/or cash flow increased in a 20% to 40% range mainly due to the Cost-Based and Revenue-Based Synergies derived by the horizontal acquisition process. In the second group (Group 2) the impact on the stock value and/or cash flow was practically nonexistent. Group 1 is integrated by six of the businesses and Group 2 is integrated by four. Specific differences between the two groups, in Cost-Based Synergies, and Revenue-Based Synergies will be explained in the following sections of this chapter.

4.3 ASSET DIVESTITURE MEASURES (Cost-Based Synergies)

In this section, results from the survey related to Cost-Based Synergies of the two main focus groups will be presented. It is worth mentioning at this point that the data collected from the surveys was obtained using a scale from 0% to 100%, where 0% means no divestiture measures taken at all, and 100% means that an entire department or segment of the target or acquiring businesses was absorbed by the process. The scale used is shown in Figure 4.1:
Asset Divestiture occurs in several specific departments in manufacture oriented businesses. Almost 90% of 2,020 horizontal acquisitions that took place during the 1988-1992 period between manufacturing companies operating within the same the same industry in the European Union, were integrated by the following departments, which experienced asset divestiture activity (Capron 1999):

- Research and Development.
- Manufacturing.
- Logistics and Distribution Services.
- Sales Networks.
- Administrative Services.

This is why the survey to investigate asset divestiture measures was divided and applied to these areas.

The first step in order to better understand the information and analyzing it in order to reject or accept the hypotheses previously proposed is to show the differences in the ratio of divestiture between the acquired and the existing businesses in Group 1. Figure 4.2 shows this piece of information.
As Figure 4.2 shows, the ratio of divestiture activity in businesses where they stock value and/or cash flow increased in a 20% to 40% after the horizontal acquisition process (Study Group 1), was higher in the target than in the acquirer, in all the departments included in the survey. The average of divestiture activity from all departments in the target was 10% to 11%. Meanwhile, the acquirer's divestiture activity average was 1% to 5%. This percentage means the proportion of personnel and facilities closed or resold due the acquisition process of the total of personnel and facilities of each business department.

The next step is to show the differences in the ratio of divestiture between the acquired and the existing businesses in Group 2. Figure 4.3 shows this piece of information.
Figure 4.3 shows the divestiture activity on businesses from Study Group 2, where impact on the stock value and/or cash flow was practically nonexistent after the horizontal acquisition process. This figure shows two important facts:

The first one is that in general, the divestiture activity in Group 2 businesses was minor that the one seen in Group 1. The average for Group 1 was 2.0 which translates to something around 5% to 6%. The average for Group 2 was 1.7, which means 1%, for both the target and the acquirer.

The second fact is that it looks like the divestiture activity in both the target and the acquirer was the same in the Group 2 businesses.

From the previous 2 charts, the following conclusion could apply (based on the sample used in this research, which includes ten manufacturing oriented businesses, located in the Monterrey industrial region):

- Following a horizontal acquisition, the divestiture of the target’s assets improves the performance (cash flow and/or stock value) of the merging firms.
This conclusion would lead us to accept the first alternative hypothesis proposed on Chapter III, section 3.3 of this thesis. However, it is worth evaluating if the differences appreciated in the charts could be statistically tested. In this situation a paired T-Test applies since this test is appropriate for testing the mean difference between paired observations (Box, Hunter y Hunter 1978).

The first paired T-Test will be testing if in fact there is a statistical difference between the divestiture ratio in the target and in the acquirer businesses in Group 1. These are the results from this test, imported directly from Minitab®:

Figure 4.4 Individual Value Differences, Divestiture Activity, Group 1.

Figure 4.4 shows the Individual Value of the Differences of each department, between the divestiture ratio in the target and in the acquirer businesses in Group 1. Each of the differences is positive, as Figure 4.2 shows. The Y axis of this chart is not significant. Next, the actual results of the Paired T-Test:
Paired T-Test and CI: Target G1, Acquirer G1

Paired T for Target G1 - Acquirer G1

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<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>StDev</th>
<th>SE Mean</th>
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<tbody>
<tr>
<td>Target G1</td>
<td>5</td>
<td>2.625</td>
<td>0.490</td>
<td>0.219</td>
</tr>
<tr>
<td>Acquirer G1</td>
<td>5</td>
<td>1.357</td>
<td>0.145</td>
<td>0.065</td>
</tr>
<tr>
<td>Difference</td>
<td>5</td>
<td>1.267</td>
<td>0.474</td>
<td>0.212</td>
</tr>
</tbody>
</table>

95% CI for mean difference: (0.679, 1.856)
T-Test of mean difference = 0 (vs not = 0): T-Value = 5.98  P-Value = 0.004

Since the P-Value from the test is less than 0.05 we can accept with a 95% confidence that there is a statistical difference. In other words, a statistically proven difference exists.

The second paired T-Test will be testing if in fact there is a statistical difference between the divestiture ratio between the target and the acquirer businesses in Group 2. These are the results from this test, imported directly from Minitab®:
Figure 4.5 Individual Value Differences, Divestiture Activity, Group 2.

Figure 4.5 shows the Individual Value of the Differences of each department, between the divestiture ratio in the target and in the acquirer businesses in Group 2. Some of the differences are positive, and some other negative, as Figure 4.3 shows. The Y axis of this chart is not significant. Next, the actual results of the Paired T-Test:

**Paired T-Test and CI: Target G2, Acquirer G2**

Paired T for Target G2 - Acquirer G2

<table>
<thead>
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<th>StDev</th>
<th>SE Mean</th>
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<td>Target G2</td>
<td>5</td>
<td>1.776</td>
<td>0.287</td>
<td>0.128</td>
</tr>
<tr>
<td>Acquirer G2</td>
<td>5</td>
<td>1.746</td>
<td>0.291</td>
<td>0.130</td>
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<tr>
<td>Difference</td>
<td>5</td>
<td>0.030</td>
<td>0.1498</td>
<td>0.0670</td>
</tr>
</tbody>
</table>

95% CI for mean difference: (-0.1560, 0.2160)
T-Test of mean difference = 0 (vs not = 0): T-Value = 0.45  P-Value = 0.678
Since the P-Value from the test is more than 0.05 we can accept with a 95% confidence that there is no statistical difference.

To conclude section 4.3 of this chapter, the graphical analysis lead us to accept the first alternative hypothesis proposed on section 3.3 on the previous chapter of this thesis. In addition to the graphical analysis, two Paired T-Tests were performed using Minitab® as a statistical analysis tool. The first test confirmed that in fact there is a difference in the divestiture ratio between the targets and the acquirers, showing that the divestiture ratio is higher in the targets than in the acquirers businesses.

The alternative hypothesis accepted is the following:

- \( H_i \). Following a horizontal acquisition, the divestiture of the target’s assets improves the performance (cash flow and/or stock value) of the merging firms.

The second Paired T-Test confirmed that for the businesses in Group 2, there is no statistical difference in the divestiture ratio between the targets and the acquirers. This means that the Group 2 businesses which participated in the survey presented a similar divestiture ratio between the targets and the acquirers.

4.4 RESOURCE REDEPLOYMENT MEASURES (Revenue-Based Synergies)

In this section, results from the survey related to Revenue-Based Synergies of the two main focus groups will be presented. It is worth mentioning at this point that the data from the surveys was collected using a scale from 1 to 5, according to the original survey design (Capron 1999), where 1 means no resource redeployment activity at all, and 5 means full resource redeployment in a specific area.

The sample previously cited of 2,020 horizontal acquisitions that took place during the 1988-1992 period between manufacturing companies operating within the same the same industry, indicated that in the vast majority, the resource redeployment measures (revenue-based synergies), had impact in the following categories (Capron 1999):
• Product Innovation Capabilities.
• Know-how in Manufacturing Processes.
• Marketing Expertise.
• Suppliers’ Relationship.
• Distribution Expertise.

Once again, the first step in order to better understand the information and analyzing it to answer the proposed research questions is to show the differences in the resource redeployment ratio between the acquired and the existing businesses in Group 1. Figure 4.4 shows this piece of information.

It is important to mention that this time, the target bars (in blue) show the ratio of resources used by the acquirer from the target business. The red bars show the extent of resources transferred from the acquirer to the target business.
Information from Figure 4.6 indicates that for the Group 1 businesses, the proportion of resource redeployment from the target to the acquirer and from the acquirer to the target was the same, or almost the same.

Next, the differences in the resource redeployment ratio between the acquired and the existing businesses in Group 2 are shown in Figure 4.5.

In Figure 4.7 once again, the target bars (in blue) show the ratio of resources used by the acquirer from the target business. The red bars show the extent of resources transferred from the acquirer to the target business.

From the previous 2 charts, the following conclusion could apply (based on the sample used in this research, which includes ten manufacturing oriented businesses, located in the Monterrey industrial region):

- Following a horizontal acquisition, the redeployment of the acquirer’s resources to the target, and the redeployment of the target’s resources to the acquirer
should be kept in a similar proportion in order to improve the performance (cash flow and/or stock value) of the merging firms.

However, it is worth evaluating if the differences and similarities appreciated in the charts could be statistically tested. Once again, a Paired T-Test applies since this test is appropriate for testing the mean difference between paired observations (Box, Hunter y Hunter 1978).

The first paired T-Test will be testing if in fact there is a statistical difference between the resource redeployment ratio between the target and the acquirer businesses in Group 1. These are the results from this test, imported directly from Minitab®:

Figure 4.8 shows the Individual Value of the Differences of each department, between the divestiture ratio in the target and in the acquirer businesses in Group 1. Some of the differences are positive, and some other negative, as Figure 4.6 shows. The Y axis of this chart is not significant. Next, the actual results of the Paired T-Test:
### Paired T-Test and CI: Target G1 RR, Acquirer G1 RR

Paired T for Target G1 RR - Acquirer G1 RR

<table>
<thead>
<tr>
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<th>N</th>
<th>Mean</th>
<th>StDev</th>
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</tr>
</thead>
<tbody>
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<td>3.400</td>
<td>0.324</td>
<td>0.145</td>
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<tr>
<td>Acquirer G1 RR</td>
<td>5</td>
<td>3.450</td>
<td>0.314</td>
<td>0.140</td>
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<tr>
<td>Difference</td>
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<td>-0.050</td>
<td>0.259</td>
<td>0.116</td>
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</table>

95% CI for mean difference: (-0.372, 0.272)

T-Test of mean difference = 0 (vs not = 0): T-Value = -0.43  P-Value = 0.688

Since the P-Value from the test is more than 0.05 we can accept with a 95% confidence that there is no statistical difference. This confirms that the proportion of resource redeployment from the target to the acquirer and from the acquirer to the target was statistically the same.

The second paired T-Test will be testing if in fact there is a statistical difference between the resource redeployment ratio between the target and the acquirer businesses in Group 2. These are the results from this test, imported directly from Minitab®:
Figure 4.9 Individual Value Differences, Resource Redeployment, Group 2.

Figure 4.9 shows the Individual Value of the Differences of each department, between the divestiture ratio in the target and in the acquirer businesses in Group 2. Some of the differences are positive, and some other negative, as Figure 4.7 shows. The Y axis of this chart is not significant. Next, the actual results of the Paired T-Test:

**Paired T-Test and CI: Target G2 RR, Acquirer G2 RR**

Paired T for Target G2 RR - Acquirer G2 RR

<table>
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<tr>
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<th>N</th>
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<th>StDev</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target G2 RR</td>
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<td>1.840</td>
<td>0.422</td>
<td>0.189</td>
</tr>
<tr>
<td>Acquirer G2 RR</td>
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<td>2.600</td>
<td>0.418</td>
<td>0.187</td>
</tr>
<tr>
<td>Difference</td>
<td>5</td>
<td>-0.760</td>
<td>0.488</td>
<td>0.218</td>
</tr>
</tbody>
</table>

95% CI for mean difference: (-1.366, -0.154)
T-Test of mean difference = 0 (vs not = 0): T-Value = -3.48  P-Value = 0.025
Since the P-Value from the test is less than 0.05 we can accept with a 95% confidence that there is a statistical difference. This confirms that for the Study Group 2 the resource redeployment ratio between the target and the acquirer businesses is statistically different.

To conclude section 4.3 of this chapter, both graphical and the statistical analyses leaded to accept the alternative hypothesis related to resource redeployment proposed on section 3.3 on the previous chapter of this thesis.

- Hi. Following a horizontal acquisition, the redeployment in the same proportion of the acquirer’s resources to the target, or vice versa, improves the performance (cash flow and/or stock value) of the merging firms.

The Chapter V of this thesis will concentrate all the conclusions and important findings covered in this chapter. In addition, recommendations for businesses going through horizontal acquisitions in the Monterrey industrial region will be proposed based on what was learned in the present research.

The conclusions for sections, 4.3 and 4.4 are based on the fact that in both Group 1 and Group 2, the cash flow and the stock value (when available), changed in the same proportion and in the same direction after the horizontal business acquisition process was concluded. An important research opportunity for future studies could be focused into studying businesses where the cash flow and the stock value changed in a different proportion, or more drastically, if they changed in a different direction.
5.1 INTRODUCTION

The objectives of this chapter are to confirm that the research questions have been answered and to present conclusions and recommendations based on the analysis of the collected information and an interpretation of the results of this analysis, which was developed in Chapter 4 of this thesis. In addition, opportunities for future research will be addressed, based on the limitations of the study.

5.2 CONCLUSIONS

One of the most important conclusions from this research is that, according to the information collected, most of the variables affecting an acquisition performance found in the literature were common in the horizontal acquisitions processes in manufacturing-oriented businesses in the Monterrey industrial region. As explained in sections 2.3, 2.4 and 2.5 of this thesis, these variables could be divided in two groups:

- Cost-Based Synergies (Asset Divestiture).
- Revenue-Based Synergies (Resource Redeployment).

The value creation of this thesis consists in evaluating how the businesses included in the surveys handled these synergies. The understanding about how these synergies can affect in a positive way the value of businesses going through acquisitions processes would be commented in the Speculations for Future Research section of this chapter.

General concepts about how Cost-Based Synergies and Revenue-Based Synergies affect a horizontal acquisition performance can be found in Chapter 2, from sections 2.2 to 2.5.
5.2.1 Conclusions, Cost-Based Synergies (Asset Divestiture)

A conclusion in this subject was to accept the alternative hypothesis proposed on section 3.3 of this thesis. The graphical analysis and statistical test which support this conclusion can be found in the Chapter 4, section 4.3 of this thesis. The null hypothesis is the following:

- \( H_0 \). Following a horizontal acquisition, the divestiture of the target’s assets improves the performance (cash flow and/or stock value) of the merging firms.

Another conclusion in the asset divestiture subject is that if the divestiture occurs in a similar proportion in both the target and the acquirer businesses, no impact in the business value could be generated. This conclusion is supported by statistical and graphical evidence in Chapter 4, section 4.3 of this thesis.

5.2.2 Conclusions, Revenue-Based Synergies (Resource Redeployment)

A conclusion in this subject was to accept the alternative hypothesis proposed on Chapter III of this thesis, related to resource redeployment. The graphical analysis and statistical test which support this conclusion can be found in the Chapter 4, section 4.4 of this thesis. This is the alternative hypothesis:

- \( H_1 \). Following a horizontal acquisition, the redeployment in the same proportion of the acquirer’s resources to the target, or vice versa, improves the performance (cash flow and/or stock value) of the merging firms.

In other words, for a horizontal acquisition to have a positive impact in the business value in a 20% to 40% range, the resources redeployed from the acquirer to the target have to be redeployed in a similar proportion.
5.3 RECOMMENDATIONS

Based on the analysis of the collected information and an interpretation of the results of this thesis, the following recommendations can be made for horizontal acquisition processes in manufacturing oriented businesses, in the Monterrey industrial area:

- When facing a horizontal acquisition process, in the Monterrey industrial area, in a manufacturing oriented business, divesting the target's assets around 1.5 times more than the acquirer assets could be recommended in order to improve the business value (cash flow and/or stock value) in a 20% to 40%. The business departments where the assets are usually divested are:
  - Research and Development.
  - Manufacturing.
  - Logistics and Distribution Services.
  - Sales Networks.
  - Administrative Services.

- To improve the business value (cash flow and/or stock value) in a 20% to 40% due to the horizontal acquisition process, it is recommended to redeploy the similar proportion of resources from the acquirer to the target and from the target to the acquirer. The business areas where resources are usually redeployed are:
  - Product Innovation Capabilities.
  - Know-how in Manufacturing Processes.
  - Marketing Expertise.
  - Suppliers’ Relationship.
  - Distribution Expertise.

5.4 LIMITATIONS OF THE STUDY

After analyzing the results and conclusions obtained in this thesis, and comparing those to previous similar researches and studies, it was concluded that scenarios
beyond the scope of this thesis could be analyzed, but additional time would be required. Some of these limitations are:

- The sample size was 10 surveys, applied to 10 different businesses. No replicas were obtained.
- The survey was applied to employees of businesses located only in the Monterrey industrial region.
- The 10 businesses where these employees work are manufacture-oriented.
- In the businesses were the survey was applied, the cash flow and the stock value (when available) changed in the same direction, and in the same proportion. Businesses where cash flow and stock value changed in an opposite direction after the horizontal acquisition process were not included.
- In the 10 horizontal businesses acquisitions included in the survey, one of the participants in each of the processes (the target or the acquirer) was an international corporation. It has been proven that when both participants in a horizontal acquisition process are local, the performance of the acquisition is different than if one of the participants is a foreign (Capron 1999).

5.5 SPECULATIONS FOR FUTURE RESEARCH

Based on the limitations of the study, and with the objective of making the conclusions and recommendations from this thesis applicable to other industrial regions, and to other businesses sectors, this is a list of speculations for future research:

- Include businesses located in other industrial regions, and from different businesses sectors.
- Increment the sample size and obtain replicas.
- Include only businesses where the stock value is available. This could make the data evaluation process more accurate.
- Include businesses were the cash flow and the stock value had changed in different directions and/or different proportions.
• Include other Study Groups in the data analysis section, taking advantage of a larger sample size. Local acquisitions and international acquisitions (where one of the participants is an international business), could be an example of the proposed additional groups. Other interesting Study Group category could be business sector. Other than manufacture-oriented, like the one presented in this thesis.

• Modify the survey in order to obtain information that leads to understand how and why the Cost-Based Synergies and Revenue-Based Synergies improved or not the business value after a horizontal acquisition process.
BIBLIOGRAPHY


SURVEY

Name:

Acquirer business:

Target business:

Please select the area where you were working at the moment the acquisition took place:

<table>
<thead>
<tr>
<th>Research and development</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacture / Production</td>
<td></td>
</tr>
<tr>
<td>Distribution / Logistics</td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td></td>
</tr>
<tr>
<td>Administrative Services</td>
<td></td>
</tr>
</tbody>
</table>
1. Post-acquisition divestiture measures

The first section of the survey is designed to assess rationalization and restructuring measures that have been implemented as a result of the acquisition. 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.

CONSOLIDATION AND RESTRUCTURING OF R&D (RESEARCH AND DEVELOPMENT)

Please give a rough assessment of the proportion of the physical R&D facilities closed or resold, the proportion of the R&D personnel whose contract was modified or terminated by the restructuring of R&D facilities, and the proportion of the R&D personnel cut as a result of the acquisition.

**Acquired business**

<table>
<thead>
<tr>
<th>% of physical R&amp;D facilities closed or resold (as a proportion of total physical R&amp;D facilities).</th>
<th>0%</th>
<th>1-10%</th>
<th>11-30%</th>
<th>31-50%</th>
<th>51-70%</th>
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</tr>
</thead>
<tbody>
<tr>
<td>% of R&amp;D personnel cut (as a proportion of total R&amp;D personnel).</td>
<td>0%</td>
<td>1-10%</td>
<td>11-30%</td>
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<td>91-100%</td>
</tr>
</tbody>
</table>

**Existing business**

<table>
<thead>
<tr>
<th>% of physical R&amp;D facilities closed or resold (as a proportion of total physical R&amp;D facilities).</th>
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<td>71-90%</td>
<td>91-100%</td>
</tr>
</tbody>
</table>
CONSOLIDATION AND RESTRUCTURING OF MANUFACTURING

Please give a rough assessment of the proportion of the physical manufacturing facilities closed or resold, the proportion of the production capacity restructured, and the proportion of the manufacturing workforce cut as a result of the merger.

**Acquired business**

<table>
<thead>
<tr>
<th>% of physical manufacturing facilities closed or resold (as a proportion of total physical manufacturing facilities).</th>
<th>0%</th>
<th>1-10%</th>
<th>11-30%</th>
<th>31-50%</th>
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</thead>
<tbody>
<tr>
<td>% of manufacturing personnel cut (as a proportion of total manufacturing personnel).</td>
<td>0%</td>
<td>1-10%</td>
<td>11-30%</td>
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<td>71-90%</td>
<td>91-100%</td>
</tr>
</tbody>
</table>
CONSOLIDATION AND RESTRUCTURING OF DISTRIBUTION AND LOGISTICS SERVICES

Please give a rough assessment of the proportion of the physical distribution facilities closed or resold, the proportion of the distribution capacity restructured, and the proportion of the distribution personnel cut as a result of the merger.

**Acquired business**

<table>
<thead>
<tr>
<th>% of physical distribution facilities closed or resold (as a proportion of total physical distribution facilities).</th>
<th>0%</th>
<th>1-10%</th>
<th>11-30%</th>
<th>31-50%</th>
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</tr>
</tbody>
</table>
CONSOLIDATION AND RESTRUCTURING OF SALES NETWORKS

Please give a rough assessment of the proportion of the sales networks closed or resold, the proportion of the sales affected by the restructuring of sales networks, and the proportion of the sales personnel cut as a result of the merger.

**Acquired business**

<table>
<thead>
<tr>
<th>% of sales networks closed or resold (as a proportion of total sales networks).</th>
<th>0%</th>
<th>1-10%</th>
<th>11-30%</th>
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</table>

**Existing business**

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<td>31-50%</td>
<td>51-70%</td>
<td>71-90%</td>
<td>91-100%</td>
</tr>
</tbody>
</table>
CONSOLIDATION AND RESTRUCTURING OF ADMINISTRATIVE SERVICES

Please give a rough assessment of the proportion of the administrative closed or resold, the proportion of the administrative personnel whose contract was modified or terminated by the restructuring of administrative services, and the proportion of the administrative personnel cut as a result of the merger.

Acquired business

<table>
<thead>
<tr>
<th>% of administrative services closed (as a proportion of total administrative services).</th>
<th>0%</th>
<th>1-10%</th>
<th>11-30%</th>
<th>31-50%</th>
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Existing business

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<tbody>
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<td>% of administrative personnel cut (as a proportion of total administrative personnel).</td>
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<td>31-50%</td>
<td>51-70%</td>
<td>71-90%</td>
<td>91-100%</td>
</tr>
</tbody>
</table>
2. Post-acquisition resource redeployment measures

The following sections ask 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.

TRANSFER OF RESOURCES, KNOWLEDGE AND CAPABILITIES

To what extent have you used resources from the acquired business to assist your existing business?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>To some extent</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use of acquired business’s product innovation capabilities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Use of acquired business’s know-how in manufacturing processes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Use of acquired business’s marketing expertise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Use of acquired business’s suppliers’ relationship.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Use of acquired business’s distribution expertise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

To what extent have you transferred resources from your existing business to assist your acquired business?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>To some extent</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Transfer of product innovation capabilities to the acquired business.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Transfer of know-how in manufacturing processes to the acquired business.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Transfer of marketing expertise to the acquired business.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Use of your existing business’s supplier relations by the acquired business.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Transfer of distribution expertise to the acquired business.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
3. Value-creating mechanisms

The following sections deal with the effects of the acquisition on performance. Please answer Section A OR Section B.

Answer section A if the acquired business has continued to operate mainly on a stand-alone basis.

Answer section B if the acquired business has been substantially integrated into your existing business.

---

Answer Section A OR Section B

**Section A.** What has been the impact of the acquisition on the position of the acquired business and of your existing business in terms of:

<table>
<thead>
<tr>
<th>Acquired business</th>
<th>Existing business</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative Impact</td>
</tr>
<tr>
<td>1. R&amp;D capabilities.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Design cycle (shortening of the cycle of innovation/manufacturing/time to market).</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Product cost.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Input prices.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5. Broadening of product line.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6. Geographical coverage.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

---

**Section B.** What has been the impact of the acquisition on the position of the consolidated business in terms of:

<table>
<thead>
<tr>
<th>Acquired business</th>
<th>Existing business</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative Impact</td>
</tr>
<tr>
<td>7. R&amp;D capabilities.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8. Design cycle (shortening of the cycle of innovation/manufacturing/time to market).</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9. Product cost.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10. Input prices.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11. Broadening of product line.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12. Geographical coverage.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
4. Acquisition performance

Answer Section A OR Section B

**Section A.** Since the acquisition, how have the market share, sales and profitability of the acquired business and of your existing business changed?

<table>
<thead>
<tr>
<th></th>
<th>Acquired business</th>
<th>Existing business</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Significant Decline</td>
<td>Significant Increase</td>
</tr>
<tr>
<td>1. Market share.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Sales.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Intrinsic profitability (Profit/capital employed).</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Profitability relative to industry average.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

**Section B.** Since the acquisition, how have the consolidated business’s market share, sales, and profitability changed?

<table>
<thead>
<tr>
<th></th>
<th>Acquired business</th>
<th>Existing business</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Significant Decline</td>
<td>Significant Increase</td>
</tr>
<tr>
<td>1. Market share.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Sales.</td>
<td>1 2 3 4 5</td>
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<td>3. Intrinsic profitability (Profit/capital employed).</td>
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<td>4. Profitability relative to industry average.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
5. Control questions

The following section is related to several pre-acquisition aspects. Please compare your existing business with the acquired business just before the acquisition.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>To some extent</th>
<th>Absolutely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Your products were similar.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Your technology was similar.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Your geographical markets were similar.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. The types of customers to which you sold were similar.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. You were direct competitors.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Relative proportion of the acquired business’s annual sales in comparison to your firm’s sales before acquisition (in the line of business concerned):

1. <25%.
2. 25-49%.
3. 50-74%
4. 75-100%
5. >100%.

The acquirer’s degree of diversification:

1. Conglomerate diversified into unrelated business.
2. Firm diversified into related businesses.
3. Firm focused on one main business.