

Distribution channels in a multi-brand environment: a uniform or a market-adapted policy?

A Thesis presented by

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Even if I speak in the tongues of men and of angels, but have not love, I am only a resounding gong or a clanging cymbal. If I have the gift of prophecy and can fathom all mysteries and all knowledge, and if I have a faith that can move mountains, but have not love, I am nothing. If I give all I possess to the poor and surrender my body to the flames, but have not love, I gain nothing.

Love is patient, love is kind. It does not envy, it does not boast, it is not proud. It is not rude, it is not self-seeking, it is not easily angered, it keeps no resentments. Love does not delight in evil but rejoices with the truth. It always protects, always trusts, always hopes, always perseveres. Love never fails.

But where there are prophecies, they will cease; where there are tongues, they will be stilled; where there is knowledge, it will pass away. For we know in part and we prophesy in part, but when perfection comes, the imperfect disappears. When I was a child, I talked like a child, I thought like a child, I reasoned like a child. When I became a man, I put childish ways behind me. Now we see but a poor reflection as in a mirror; then we shall see face to face. Now I know in part; then I shall know fully, even as I am fully known.

And now these three remain: faith, hope and love. But the greatest of these is love.

Love, 1 Corinthians 13

Author's Biography

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I would like to dedicate a few and special words to my oldest son Vasco. I ask your forgiveness for all the time I have taken away from you and for all those times you have asked me to play with you and I couldn't. I want you to know that I love you very much. To my second son António that is still inside Susana's womb I wish that all that I've learned during this difficult time can make me a better man and, that way, you may become proud of your father.

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My last thoughts are dedicated to God. I give thanks to the Lord, for He is good and his love endures forever.

Abstract

This research explores a situation where multi-branded construction equipment manufacturers operate in international markets. The complexity of control of distribution channels, when it crosses borders and cultures, is presented. The crane business and the Manitowoc Company will be used as an environment and set up as the main reference for the current research.

This study tries to determine if the best distribution channel strategy is a standard or a market-adapted policy. Aiming to respond to the research problem hereby described, the construct measurement relies upon three main dependent variables or outputs: Customer Satisfaction and Trust, Brand Identity and Channel Performance. The formulated hypotheses were based on the available scientific literature and individually tested using a sample composed by 116 Manitowoc customers. Original dependent variables Customer Satisfaction & Trust and Brand Identity were divided into 4 and 6 sub-dimensions respectively. In developing the construct, this research project has assessed the way that the dependent variables differ according to three independent variables or inputs: the type of distribution channel used to serve customers; type of Manitowoc brand commercialised; and the geographical area within EMEA and APAC.

The current research has proven that the distribution channel type has a strong influence on Customer Satisfaction and Trust. Additionally, this item also varies according to the considered geographical area and the utilized brand. Furthermore, each channel type and brand generated different Brand Identity levels. Finally, it has been shown that the usage of the MDSF benefits Channel Performance and that there are statistically different means among sales areas for this variable. The MDSF channel type, the Potain brand, France&DomTom and the Middle East sales areas presented the highest results for many of the analyzed outputs. The findings obtained by the current research clearly favoured the deployment of a standard policy for the distribution channels in a multi-brand environment, composed of and based upon the elements proven to generate the best results for each dependent variable.

Keywords

Distribution channels, International markets, Multi-brand context, Industrial distribution channels, Manitowoc Company¹, Customer satisfaction and trust, Brand identity, Distribution channel performance, Standard channel policy

¹ About The Manitowoc Company, Inc.

The Manitowoc Company, Inc. is a multi-industry, capital goods manufacturer with over 100 manufacturing and service facilities in 27 countries. It is recognized as one of the world's largest providers of lifting equipment for the global construction industry, including lattice-boom cranes, tower cranes, mobile telescopic cranes, and boom trucks. Manitowoc is also one of the world's leading innovators and manufacturers of commercial foodservice equipment serving the ice, beverage, refrigeration, food prep, and cooking needs of restaurants, convenience stores, hotels, healthcare, and institutional applications. (www.manitowoc.com)

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Nomenclature

AFR (Africa Sales Area)
APAC (Asia & Pacific Region)
B2B (Business to business)
BLX (Benelux and Israel Sales Area)
CEN (Central Europe Sales Area)
CIS (Russia & CIS Sales Area)
CRM (Customer Relationship Management)
CSI (Customer Satisfaction Index)
FRA (France & DomTom Sales Area)
EMEA (Europe Middle East and Africa Region)
EVA (Economic Value Added)
GASE (General Administrative and Selling Expenses)
IBE (Iberica Sales Area)
MID (Middle East Sales Area)
MDSF (Manitowoc Direct Sales Force)
MNE (Multinational Enterprise)
NUK (North Europe & the UK Sales Area)
ROA (Return on Assets)
ROI (Return on Investment)
SPSS (Software Package for Social Sciences)
SUD (South Europe Sales Area)

1. Introduction

The process of selling and acquiring construction equipment such as cranes is the perfect example of a high involvement purchase. Taking into account that this process frequently involves the transaction of hundreds of thousands or even millions of Euros or Dollars, we rapidly see that both customer and seller dedicate a big focus and effort during the negotiation. They analyze in detail the drivers behind the needs, explore multiple solutions and try to reach a common interest through a win-win arrangement. By doing all this, unconsciously they try to conquer mutual respect and admiration. From the seller standpoint, one will try to highlight the benefits of his solution when compared to those from competition and define the selling price in accordance to that pre-conceived idea. From the customer point of view, since one knows that he owns the power of decision, he will expect to be treated with deference, that his requests are met by the seller and that he will be taken into consideration. He will expect to be dealt with the same level of importance as he thinks he has. All the previous aspects prove that these are high involvement deals.

Another factor involving construction equipment is the “branding” issue. In this sector of activity, it is common to find manufacturers producing equipment for several applications. These can be earth-moving equipment, such as excavators and dumpers, concrete-related machines, such as conveyors, mixers and load-lifting equipment, such as crawlers, mobile and tower cranes. Some of these manufacturers expanded their businesses into the food sector and started producing beverage dispensers, refrigerators and so forth. This is an attempt to diversify the business portfolio in order to minimize losses during downturns. The solution that many manufacturers used and still use to enlarge their activities involves the acquisition of other smaller manufacturers and their brand licenses. By doing so, they create a conglomerate of independent manufacturing processes, vertical marketing systems and individual brands. Branding strategy is also a key factor to the success or failure of distribution channels in international markets. Frequently, manufacturers are put under pressure whether to use a single brand or to conserve the existing independent brands. The

advantage of the first possibility is to create a synergy inside the organization itself and amidst their partners and customers. The risk is that customers might not correctly understand the reasons behind this change and eventually disapprove it. The advantage of conserving the existing brands is to minimize the impact of the different acquisitions and maximizes stability both inside and outside the organization. The risk is that the company, composed of a group of virtual separate entities might be “crushed” by the power of other strong and single competitive brands.

The crane business is no exception. Distribution channels play a very important role and it is at the core of the entire process. A big multinational company is forced to operate in many of the regions of the world in order to be sustainable and profitable in the long run. Hence, it has to learn how to deal with many cultures, traditions and “ways of doing business”. Since high involvement purchases involve people and consequently their own mentality, sellers must adapt to customers’ needs and expectations. What a German equipment manager from a German construction company, operating in Berlin, expects from a salesman is completely different from what an Angolan construction company owner, operating in Luanda, expects from someone trying to sell him a crane. In some cases, final customers appreciate more the fact of dealing directly with the manufacturer, through a direct sales force, because they believe they will get better after-sales support and better pricing and discount policies. Some other customers prefer to deal with a specific dealer in the region because of historical reasons and long-term relationships. This might raise a dilemma at a managerial level. The ideal situation would be to have a specific and adapted distribution channel for every country in the world. However, this would raise many difficulties in managing such an intricate structure and would eventually be impossible to deal with. This fact takes us into the centre of the whole problem that is to figure out what is the best compromise between individual adapted policies or standard policies in terms of distribution channels for international markets.

In terms of structure, the current research is composed of six main chapters.

In Chapter 1, a brief Introduction is made concerning the context of the Manitowoc Company and the research problem. A brief summary of the proposed research is described and presented.

In Chapter 2, a Literature Review is presented and debates several themes providing the necessary context and supporting the research development. The first part refers to general literature about Distribution Channels (Stock and Lambert, 1983; Griffith, 2005; Cabaniss, 1995; Kim and Frazier, 1996; Sanzo and Trespacios, 2000 and Gilmour, 1999). Then, it proceeds with an exposition about the international markets context in order to better understand the environment where the Manitowoc Company operates, the market constraints and the respective underlying opportunities (Lee, Knight and Kim, 2008; Beattie, 2006; Stock and Lambert, 1983; Samiee and Walters, 2006; Beverland, 2005). Since the Manitowoc Company commercializes several product or service brands, it also explores a multi-brand environment and dedicated literature is summarized: brand analysis, the multinational context and the definition and importance of the brand (Davis, Golobic and Marquardt, 2009; Martinez and Pina, 2003; Wood, 2000; Lee, Knight and Kim, 2008; Dillon et al., 2001; Keller, 1993; Oliver, 1998). Another important aspect which is debated is the industrial background of Manitowoc and the consequences on its industrial and B2B distribution channels design: the importance of channels' design (Coelho, Easingwood and Coelho, 2003), the Internet contribution (Sharma and Mehrotra, 2006; Rosenbloom, 2007), multi-channel strategies (Rosenbloom, 2007; Myers, Pickersgill and Van Metre, 2004; Stone, Hobbs and Khaleeli, 2002; Payne and Frow, 2004; Sharma and Mehrotra, 2006; Balasubramanian, Raghunathan and Mahajan, 2005) and the internationalization process in an industrial environment. A vital contribution for this research was the available literature about channel satisfaction. Therefore, several components were identified and explained: Channel Satisfaction relevancy (Schmitz and Wagner, 2007; Cavusgil, Deligonul and Chun, 2004; Stock and Lambert, 2003; Andaleeb, 1995; Sahadev, 2008; Morgan and Hunt, 1994; Brown, Lusch and Smith 1991); the definition of satisfaction (Andaleeb, 1995; Kim, 1998; Klein and Roth, 1993); the measurement of satisfaction (Coelho, Easingwood and Coelho, 2003; Wagner and Schmitz, 2007; McManus, 1975; Geyskens and Steenkamp,

2000; Sahadev, 2008; Brown, Lusch and Smith, 1991); and also the determinants of satisfaction (Kim, 1998). Finally, the performance of distribution channels is explored in order to provide the required knowledge which could guideline the research approach on this item (Coelho, Easingwood and Coelho, 2003; Gilmour, 1999; Photis, 2004; Bellhouse and Hutchinson, 1993; Bellhouse and Hutchinson, 1993).

In Chapter 3, the Research Problem and Research Hypotheses are formulated and based on the available scientific literature. Therefore, three main dependent variables (outputs) are taken into account: customer satisfaction concerning the distribution channels (Coelho, Easingwood and Coelho, 2003; Schmitz and Wagner, 2007); the brand identity of each Manitowoc brand (Lee, Knight and Kim, 2008); and also channel performance (Gilmour, 1999; Bellhouse and Hutchinson, 1993; Stock and Lambert, 1983). Three independent variables (inputs) are considered: distribution channel type, brand and sales area and the combination of these results into different values of the dependent variables.

In Chapter 4, the Research Methodology is presented. The adopted research design, research population, construct measurement and the different statistical techniques are detailed accordingly and supported by the available literature (Malhotra, 2010; Kim, 1998; Schmitz and Wagner, 2007; Photis, 2007; Lee, Knight and Kim, 2008; Gilmour, 1999; Bellhouse and Hutchinson, 1993; Johnston and Marshall, 2006).

In Chapter 5, the results of the research are presented and discussed. It starts by characterizing the profile of the companies that responded to the questionnaire. The research sample profile is, therefore, established. Descriptive statistics, such as frequencies, mean, standard deviation, minimum and maximum values, are used to characterise Customer Satisfaction and trust and brand identity items. Statistical procedures are presented and the variables are then decomposed through factor reduction. The analysis proceeds with the interaction between Customer Satisfaction and Trust and Brand Identity dependent variables with the 3 independent variables. Statistical results are presented and conclusions are formulated. The respective research hypotheses are supported or rejected. The last section of this Chapter is dedicated to the analysis of the interaction between

channel performance dependent variable with the 3 independent variables. Statistical results are presented and conclusions are formulated. The respective research hypotheses are supported or rejected.

In Chapter 6, a summary of the research is presented and some managerial conclusions are formulated. Additionally, the limitations of the research and the difficulties encountered during the study are identified and some possible future investigations are proposed.

2. Literature Review

Introduction

In this Chapter, a Literature Review is presented within the scope of distribution channels in the context of international markets, multi-brand environment and industrial B2B. To accomplish this objective, several themes and scientific articles will be debated providing the necessary context and supporting the development of the research. In the first part, general literature about distribution channels will be presented. We then proceed with an exposition about international markets, market constraints and opportunities. Since the Manitowoc Company commercializes several products and also a service brand, we will explore a multi-brand environment and dedicated literature will be summarized. Another important factor taken into account is the industrial background of Manitowoc and the consequences on the design of the distribution channels strategy. Channel satisfaction will also be analyzed and discussed. Finally, scientific literature on the performance of distribution channels will also be explored in order to further sustain the research analysis and conclusions.

2.1 General

According to Stock and Lambert (1983), during the last decade, many companies crossed national borders. They invested in new countries and, in some cases, in new continents and unexplored areas of the globe. This way, they became genuinely “multinational”. The internationalization of operations of many firms has not been concentrated in specific economic activities or commercial areas. This phenomenon occurred in many sectors like manufacturing, service and industrial goods, to name just a few. Very often, international markets represent a sales and profit potential much more important than local markets. However, in order to materialize this expansion, companies must find the right partners to support a distribution strategy that suits local needs and requirements.

Griffith (2005) studied the critical role of distribution channels in a company's selling activities. As markets constantly become more competitive, it has never been as important to understand the influential factors behind the distribution channels. According to Kim and Frazier (1996), underestimation of environment and diversity of channel context will most certainly deter our understanding about channel relationship establishment.

Available academic literature reveals that international distribution channels are one of the most neglected areas of international marketing studies (Cabaniss, 1995). The complexity of interactions and the diversity of external factors and different environments hinder a better comprehension of this process. Hence, it becomes very difficult to establish rules and generalizations. Sanzo and Trespalacios (2000) indicate that one of the few competitive advantages a company can still explore nowadays is an efficient distribution network. This advantage can be obtained by correctly combining several factors, including logistics and the transportation of physical goods. In fact, for many export companies, it represents an opportunity to improve from a managerial point of view. However, when companies are confronted with high costs associated with the change of the distribution system, they are forced to adopt a long-term strategy for channels' design instead. Hence, it is very important for top management to be aware of the decisive role that distribution channels design have in a firm's success. According to Gilmour (1999), a great level of cost reduction can be obtained if distribution networks are optimized. Strategic alliances and partnerships can be formed to serve that purpose.

2.2 International Markets Context

As established by Lee, Knight and Kim (2008), foreign markets represent an incomparable development opportunity, especially when local markets are relatively small for the manufacturer's growth capacity. It is expected that, *"by 2030, the world population reaches 9 billion with 90 percent living in developing countries and only 10 percent living in East Asia, Europe and North America"* (Lee, Knight and Kim, 2008:164). Additionally, the World Bank foresees a considerable growth of an emerging global middle class. Currently, this middle class represents only 7.6 percent of the world population, but it is expected to

reach 16.1 percent by 2030 (Beattie, 2006). According to Stock and Lambert (1983), exporting goods into international markets demand the perfect identification and understanding of both controllable and uncontrollable variables impacting the distribution network of the company. Amongst uncontrollable factors, we can identify political, legal, social, economic conditions, market structure, competition and distribution technologies available in international markets. Although uncontrollable, they must nevertheless be taken into consideration for the company's distribution strategy.

The first step is to recognize that operations within local and foreign markets can potentially be different. Factors like transportation variants, stocking and warehousing depend upon the available distribution solutions and are included in the essential managerial elements. This is even more so if we take into account that exporting to international markets is a complex activity. If a company wants to be successful, it must design the distribution channels in an optimal way, individually adapted to each export market (Stock and Lambert, 1983). This process includes planning, implementation and control of all distribution activities. The geographical configuration of the foreign market to a great extent affects the strategy to be applied, e.g., distribution within the United States must be planned in a radically different way as distribution within the U.K. because of the territory size.

Another very important aspect is the social and cultural norms that, all together, compose the local mentality of the market. This fact has an impact on the way customers expect to be treated and on what they are expecting from a seller. International export requires an effective follow-up and control of operations from the manufacturer. Only this will guarantee a minimum level of service to its customers and lower operations costs. Regardless of this control from the exporting company, the mix ratio cost/service will vary according to each international market. Stock and Lambert (1983) call for the example of distribution in developing areas such as Africa, South America or Asia. In this case, the distribution channel is long and composed by many intermediaries, between the manufacturer and even more small retailers. Absence of physical distribution networks, unskilled personnel, improper transport and warehousing conditions are commonly seen.

To the contrary, in developed countries and societies e.g. Germany, Canada and Japan, the distribution networks are highly advanced. Firms expanding into these countries will be able to rely on diverse and timely physical transportation systems, technologically advanced warehousing and skilled workforce.

Generally, companies provide a higher service level to its domestic customers when compared to foreign markets. This is due to a longer supply time originated by geographical distance, customs bureaucracy, product customization, etc. *“The consistency of service which the firm is able to provide its domestic customers probably cannot be achieved internationally”* (Stock and Lambert, 1983:30). International distribution involves transportation partners, hauling, transfers, loading, unloading and handling, crossing international barriers and customs control. Time-in-transit can vary enormously putting the manufacturer’s distribution standards in danger. One solution within the manufacturer’s reach in order to improve customer service levels in an international market is to create a facility in the foreign market. Many companies adopt this strategy in order to become competitive in foreign markets. This way, they can level up their own customer service with the existing competition. Conversely, according to each international market, costs to maintain the same level of service might vary. As shown in Table 2.2.1, distribution costs are higher e.g. in Japan and in the United States than in Australia and in the United Kingdom.

Country	U.S. (%)	U.K. (%)	Japan (%)	Australia (%)
Transportation	6.4	5.5	13.5	2.5
Receiving and Dispatch	1.7	2.5	13.0	1.4
Warehousing	3.7			1.8
Packaging and Storage	2.6			1.7
Inventory	3.8			3.6
Order Processing	1.2			2.1
Administration	2.4	2.0		1.0
TOTAL	21.8	16.0	26.5	14.1

Table 2.2.1 – Distribution Costs as a Percentage of Sales¹

Therefore, before expanding into international markets, firms must explore all transportation alternatives. Distribution costs and generated service levels will depend greatly upon this strategic decision. The more products need to be handled, the higher the probability of damage. And international trade is critical to this extent because it requires several such handlings. Generally, the damage/loss rate in export market handling is higher than in domestic movements. As mentioned previously, the existing differences between countries can be originated by regulations, subsidies, taxes, government interventions and other regulatory factors, e.g. *“Rail service in Europe is usually much better than in the United States because equipment, track and facilities are in better condition due to government ownership and/or subsidies of the rail system”* (Stock and Lambert, 1983:31).

One of the most important factors involving international markets is customer requirements. Very often, product customization is required to meet these customer requirements. Hence, the manufacturer must adapt its production lines internally and processes before exporting goods. Nevertheless, there are some evident advantages of entering into international markets (Stock and Lambert, 1983:34):

- *“Products can be near the end of its life cycle in the domestic market at the same time as it experiences a growth market abroad.*
- *In some product lines, competition in foreign markets may be less intense than domestically.*
- *If the firm has excess capacity, it can produce for foreign markets at a favourable marginal cost per unit.*
- *Geographical diversification, i.e. going international, may be a more desirable alternative than product-line diversification.*
- *Perhaps the most obvious reason to consider world markets is the potential they offer.*

¹ Gilmour and Rimmer (1976:65)

- *An additional reason for a firm to enter international markets is sourcing of raw materials, component parts or assemblies”.*

When companies decide to enter an international market, there are four possible entry modes (Stock and Lambert, 1983):

- a) **Exporting:** it is the most common solution of distribution in international markets. It requires a low level of knowledge about the foreign market because the firm transfers the distribution functions to a local partner. The advantages of this type of export are flexibility, low operating costs and risk. Connected with the last one is the fact that companies have minimum exposure to foreign political uncertainties. Additionally, if the expected commercial results are not attained, it is easier for the exporting company to withdraw from such markets. It is common for exporting companies to adopt this kind of distribution during an initial phase. During this phase, manufacturers will try learn as much as possible about the export market. If expectations are met and the growth potential can justify it, companies can adopt other types of export strategies. Exporting presents however some disadvantages. If competing manufacturers decide to enter the export markets, they will obtain competitive advantages. These can be the use of local currencies, absence of import quota constraints, absence of import taxation, geographical proximity and control of the service level offered to the customer. Another disadvantage is the lack of control over some marketing strategies like pricing, promotion and “place of distribution”. In this case, much of the manufacturers’ success depends on the exporting intermediaries.
- b) **Licensing:** this is a legal possibility whereby the manufacturer allows a local partner in the foreign market to produce goods under the agreement, trademark and using the same processes owned by the licensor (manufacturer). Unlike exporting, this strategy provides a much higher level of control over the licensee operations. These are usually established during negotiations prior to the settlement. Distribution tasks are performed by the licensee. Licensing does not require important capital

investments and, therefore, there is a low level of risk for the manufacturer. This system is usually applied by medium size companies and it is appropriate when local markets are protected by high importation taxation and reduced quotas. The licensor is compensated through the payment of royalties depending on the sales volume of the licensee. The main disadvantage of this solution is the potential risk of the licensee becoming a competitor due to the learning process about technological know-how and manufacturing processes. Another disadvantage is that cancellation of licensing contracts may take longer to achieve than in the case of exporting.

- c) Joint Ventures: it is appropriate if the manufacturer wants to have a higher control over the foreign partner than that which a Licensing solution can offer. Joint Venture offers the best compromise between flexibility on one hand and control of operations on the other hand. Risk is higher than for Licensing but the manufacturer can provide a great deal of input into the channel and distribution strategies of the foreign company.
- d) Ownership: this strategy can be materialized either by acquisition, or by expansion. The acquisition of a foreign company can reduce expansion effort and time. The manufacturer acquires not only the facilities, human capital and equipment but also the existing distribution channel relationships. It is absolutely necessary that the domestic firm knows the foreign market in detail. Success of operations will depend on that factor. Ownership in the foreign market will enable the domestic company to compete locally based on competitive pricing. This is possible thanks to the elimination of transportation costs, import taxes and customs duties. Lead time also decreases, reinforcing competitive advantage. As disadvantages of ownership, we can identify the lack of flexibility due to the long-term commitment and investment in the foreign market. When facing economic downturns or social instability, withdrawal from these areas is longer and harder because fixed facilities and equipment cannot be disposed of so quickly. Another risk of the ownership is whenever governments decide to nationalize foreign companies and assets. This is a recurrent possibility, especially in unstable and rogue countries.

One last feature to be considered includes financial aspects of international physical distribution. An exporting company has to face very different realities when compared to the domestic one at several levels: inventory, working capital, financing and capital investment. For example, since physical distribution of goods into a foreign market is much slower due to longer geographical distances, additional handling, customs formalities, etc, cash flow follows a rather different time frame. This has an important impact on a company's finance system. The manufacturer must be aware of this different reality and evaluate internally if the firm is prepared for it. *"The business may be profitable, but companies may learn that the profit is all in the books and that the slower cash flow of the international operation demands significant injections of funds to maintain cash position. Typically, foreign operations require larger amounts of working capital than domestic operations"* (Stock and Lambert, 1983:39).

To conclude and referring to other authors e.g. Samiee and Walters (2006), there are several reasons that make exporting to international market a challenging activity. Firstly, supply chains have to become much more competitive and lean. Secondly, problems brought about by physical transportation of goods at very long distances, including distribution across national boundaries, need to be addressed. Differences in culture, mentality and ways of doing business, institutional and managerial environments create incremental challenges when compared to a purely domestic activity. According to Beverland (2005), recent research indicates that improving the relationship between distribution partners represents a competitive advantage for exporting companies operating in international markets. Moreover, distribution strategies based upon alliances and partnerships are necessary to generate competitive advantage and differentiation. This is a critical aspect in export markets. However, *"to date there has been little empirical investigation into what constitutes relationship marketing and how firms develop and implement strategies for competitive advantage in international markets"* (Beverland, 2005:127).

2.3 Multi-Brand Context

- Definition and importance of the brand

For companies commercializing several brands, it is important to understand the role and contribution of each individual brand in shaping the global image of the mother brand. According to Martinez and Pina (2003), by generally analyzing any product, it is possible to differentiate 3 dimensions: the physical and tangible characteristics which form the product itself, the services attached to the product (warranties, finance, support and after sales, etc) and, last but not least, the intangible dimension which includes brand name, quality perceptions and reputation. One of the fields that have received most attention is the brand concept and the intangible aspects involving it. In some cases, the brand becomes even more important than the product itself. Hence, “*the brand is one of the most important assets that companies have*” (Martinez and Pina, 2003:432). Many firms explore precisely this factor and transform the brand into a factor of competitive advantage. Also, as Davis, Golicic and Marquardt (2009) explain, recent research proves that a strong brand is a keystone in B2B sectors and across multiple industries. According to Wood (2000), the brand is the point of entry when selecting between competing product offers. To that extent, brand is, certainly, critical to the success of a company. Acknowledging this fact, brand management must be approached in a strategic way.

Many firms have recently adopted a strategy which involves launching new products using extensions of the mother brand. This technique maximizes the commercial success of the new product thanks to the popularity of the original brand. Markets tend to be more receptive towards new products showing a label with a known brand. Moreover, it tends to decrease the risk failure of marketing campaigns. Conversely, the abuse of this tactic can lead to the weakness and distortion of the mother brand’s image. By investigating in detail the branding phenomena, results show that brands and brand equity are useful both for the organization, stakeholders and customers (Davis, Golicic and Marquardt, 2009). Customers’ feedback concerning brand perception in the market environment defines the brand strength and value. It is very important that, especially in very competitive sectors,

firms permanently monitor the brand value. Available literature indicates that these suppositions have an important influence on the way companies evaluate themselves. This will consequently impact brand management.

- The multinational context

As Lee, Knight and Kim's (2008) research suggests, developing brands are becoming attractive to multinational companies that might be in search of business opportunities. This is even more so if these brands possess characteristics like prestige and quality. This trend has as consequence a homogenization of strong brands in a global world of consumers and markets. In this new culture of consumption, customers are interactive players in a global development of brands. This means that global brands are a mix of hybrid and localized alternatives from different lifestyles and preferences originated in many different countries and cultures. Nevertheless, global brands cannot fit all markets because there will always be outlying cultures, economies and customer perceptions. It is a fact that strong domestic brands are the biggest competitors of global brands. If domestic firms explore local culture and preferences they will be able to withstand the invasion of global brands. It is evident in this case that multinational companies supporting global brands should customize their offer to local preferences. In developing countries, global brands are highly rated and correlated with quality. They often provide a high level of status, self-enjoyment and differentiation from others.

- Brand analysis

The brand analysis suggested by Lee, Knight and Kim (2008) propose the image assessment of global brands from a customers' point of view. This assessment includes brand perception, evaluation and commitment. Dillon *et al.* (2001) suggested that we can analyze brands on two dimensions: brand-specific associations and general brand impressions. This model presents some advantages:

- Determination of the level of superiority or ownership relative to a certain number of customers' preference dimensions;
- Identifying the individual contribution of each component in forming global brand attitudes, purchase intentions or choice;
- Rating attributes that are highly appreciated by consumers independently of the brand correlations.

Nevertheless, Lee, Knight and Kim (2008) also proposed that the two dimensions (i.e. brand-specific association and general brand impression) should be connected to the behavioural component e.g. purchase intention. Hence, their brand analysis model consists of three components: brand-specific associations, general brand impressions and brand commitment, as depicted in Illustration 2.3.1.

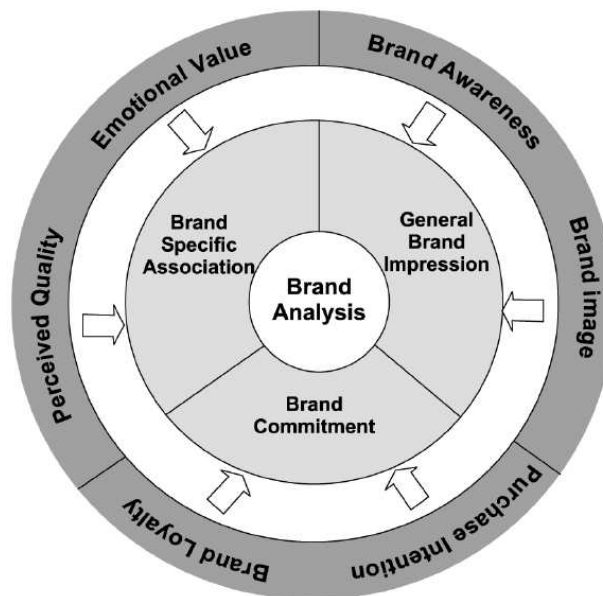


Illustration 2.3.1 – Conceptual framework of brand analysis¹

¹ Lee, Knight and Kim (2008:166)

Brand-specific associations include “*features, attributes, or benefits that consumers link to a brand and that differentiate it from the competition*” (Dillon et al., 2001:417). There are two possible constructs for brand-specific association: perceived quality and emotional value. Consumers perceive brands in terms of both physical features that include quality and robustness and non-utilitarian properties and features such as pleasure of usage. In reality, these two components have been considered as key drivers in product perceptions. Perceived quality is a subjective analysis of the product from customers. It is also a value provider when comparing competing offers. The reputation of global brands can unconsciously influence consumers to assume an increased perceived quality. It can also induce consumers to rank these products on a higher quality standard when compared to domestic products. On the other hand, emotional value is defined by Lee, Knight and Kim (2008) as being the benefits generated by feelings or affective contexts. In general, products and brands induce wide and various emotions. Consumers enjoy and are affected by these emotions.

General brand impressions are commonly referred to as “*impressions about the brand that are based on a more holistic view of the brand*” (Dillon et al., 2001:415). There are, consequently, two possible constructs that might explain this definition: brand awareness and brand image. These two play significant roles in the consumer’s buying decision as they identify the brand and its correlated attributes within the buyer’s mind. Moreover, high levels of brand awareness and image can increase marketing communication effectiveness because consumers who are favourably predisposed towards a brand may more positively respond to advertisements. This way, they may require less marketing exposure to meet communication objectives (Dillon et al., 2001). The awareness relative to a specific brand is seen as the recognition ability of that brand. Brand recognition is connected with the capacity to discriminate the brand thanks to previous experiences. Brand recall explains the ability of the consumer to store the brand image in the brain and to reproduce it if necessary (Keller, 1993). Brand image is correlated with the prestige and reputation of a given brand. Good levels of brand awareness and brand image generally lead to positive brand impressions.

Brand commitment is often connected to the consumer's engagement level in purchasing a given brand and with the intention behaviour when confronted with it. Alternatively, strongly committed customers can form a consumer base that will engage sales and profit. This base can also enable high margins and loyal partners that will protect manufacturers during downturns and also from low-price competitors. Brand loyalty is considered to be the level of loyalty of a consumer towards a brand. It can be probed to which extent a specific brand is the consumer's first choice (Oliver, 1998). A high degree of brand loyalty and purchase intention is correlated with strong brand commitment.

2.4 Industrial Channels Design

- Importance of Channels Design

Coelho, Easingwood and Coelho (2003) explain that the unanimity of marketing experts and theorists consider the choice of the right distribution channels configuration to be fundamental to the success of any company. The reason for this is that the core of the process is the exchange of information and cooperation between channel members. And the mix must facilitate this exchange. Another reason is that the selected mix should have a long-term nature. Channel mix selection represents a demanding commitment materialized by heavy investments, efforts, resources and time consumption. Changing any channel mix can be complex, difficult and painful. For the previously mentioned, the decision concerning the channel mix selection must be systematic and rationally planned. Moreover, distribution channel mix selection is now considered to be one of the key marketing variables. If well chosen, this factor can enable companies to present real competitive advantage, especially for service sectors where consumer, technological and regulatory trends have been confronted with increased competitive pressure. With no surprise, this phenomenon has pushed companies to find new channels to reach even more market segments. Sometimes distribution structures are chosen without any logic supporting them.

- Internet Contribution

As suggested by Rosenbloom (2007), the first decade of the 21st century has proven that E-commerce, global competition and new technologies have made distribution channel management much harder and complex. Even if the use of the Internet on industrial channels might be disputable, companies now have many more alternatives and solutions in order to serve their markets. On the other hand, E-commerce and Internet gave consumers a visibility and proximity to a worldwide marketplace. *“In the last two decades, particularly with the advent of the Internet, multi channel strategies have come to the fore in B2B marketing* (Sharma and Mehrotra, 2006:21). In the recent past, customers were classified and segmented according to their needs. Channels were, consequently developed upon these needs and segments. It was a common practice to utilize dealers or small distributors for small customers. Key accounts, on the other hand, were used to manage large customers. This typical configuration of distribution was disrupted by the appearance of the Internet to three different extents (Sharma and Mehrotra, 2006). Firstly, small customers could now be contacted in a much more cost effective way eliminating the need for small dealers and distributors. Secondly, dealers also learned to use the Internet and, therefore, were able to optimize their services and reduce operating costs. We can find several examples of this phenomenon e.g. Dell, Grainger and CDW. Lastly, the appearance of the Internet enabled final customers to directly contact manufacturers in case of need. From the previously shown, it is logical to assume that the Internet became a “must have” in B2B markets.

- Multi-channel Strategy

According to Rosenbloom (2007), many B2B companies utilize multiple channels in parallel to serve their markets. In fact, there are many channel types that companies can use e.g. direct sales force, distributors, sales representatives, Internet, catalogue/mail ordering, call centres, etc. However, the best compromise must be found in order to avoid potential conflict and maximize channel satisfaction amongst parallel channels. So, according to Rosenbloom (2007), the dilemma is to determine exactly the best mix for the distribution channels, including high technological E-commerce channels, promoting satisfaction

instead of conflict. Secondly, it is crucial to know if companies should, independently of the business sector and size, use multiple channels. Perhaps answering that question would be easier if companies could know exactly how, when and where their various customer segments acquire their products and services. This exercise might also require cost and benefits tradeoffs, as exemplified in Table 2.4.1(Sharma and Mehrotra, 2006:26):

Trade-offs for multichannel strategy		
Accounts	Strategy	Priority
Key accounts	Reduce	First
Internet	Expand	Second
Sales force	Expand	Third
Large distributor low service	Expand	Fourth

Table 2.4.1 – Multi-channel strategy

For this purpose, it would be important to determine the break-even point between additional channel cost increase when compared to turnover and market share increase, as illustrated on Table 2.4.2 (Sharma and Mehrotra, 2006:25):

Breakeven points for each channel and recommended strategy				
Channel	Breakeven number of accounts with		Current number of accounts	Recommendation
	Acquisition and retention costs	Retention costs only		
Internet	0	0	80,023	Add accounts to maximum
Sales force	9349	11,385	6961	Add accounts up to 9349
Key accounts	119	166	206	Reduce accounts to 166
Small distributor	2271	5750	3634	No change
Large distributor HS	590	678	675	No change
Large distributor LS	6	-5	7	Add accounts to maximum

Table 2.4.2 – Breakeven points for each channel and recommendation strategy

Conversely, is there any other configuration that might decrease the total cost of the distribution channel's mix? We can decrease the total cost if each market segment is served by the most adequate and if the most cost-effective channel is chosen. We can assess it by evaluating sales and profits generated by each type of distribution channel, as illustrated in Table 2.4.3 (Sharma and Mehrotra, 2006:25):

Returns from multichannels							
Channel	Sales (per account per year)		Profits (per account per year)		Number of accounts	Average tenure (in years)	
Internal channels							
Internet	\$253.34		\$127.45		80,023	1.4	
Salesforce	\$9872		\$2657		6961	4.5	
Key account teams	\$136,000		\$27,000		206	12.1	
Channel	Sales (per distributor)		Profits (per distributor)		Number of accounts	Maximum number of accounts	Average tenure (in years)
External channels							
Small distributors	\$6543		\$3512		3634	5200	5.4
Large distributors HS	\$43,826		\$19,502		675	1150	13.9
Large distributors LS	\$89,190		\$18,729		7	19	8.3

Table 2.4.3 – Sales and profits from each type of distribution channel strategy

Key accounts could be served by a direct sales force; call centres could call directly on small customers and medium size accounts could be managed by distributors. According to Rosenbloom (2007), a high number of companies in the B2B segment already operate accordingly to this distribution channels mix. Nevertheless, this should never be a closed question. Many times, consumers enjoy the liberty of choice concerning the way they buy the products. Hence, often it is up to the customer to choose the best channel to use. Some multi-channel strategies can provide small customers access to premium channels like direct sales force. Some small customers can become big accounts in the near future and will remain faithful to the channel accordingly to the experienced level of satisfaction.

Most of the available literature on multiple channel strategy presents a high level overview over the phenomena. For example, Myers, Pickersgill and Van Metre (2004) analyze strategies that guide customers through specific channels in an environment where multiple platforms are used. Likewise, Stone, Hobbs and Khaleeli (2002) explore the use of a checklist for the implementation of multi-channels. Payne and Frow (2004) characterize a multi channel strategy composed of 6 sequential phases:

- Define strategic multi channel goals
- Identify market and channel needs to leverage competitive advantage
- Reevaluate industry structure and channel alternatives
- Identify channel usage trends
- Reassess channel economic structure

- Implement a comprehensive channel management policy”.

Alternatively, Sharma and Mehrotra (2006:23) propose six stages for selecting the optimal channel mix as depicted in Illustration 2.4.1.

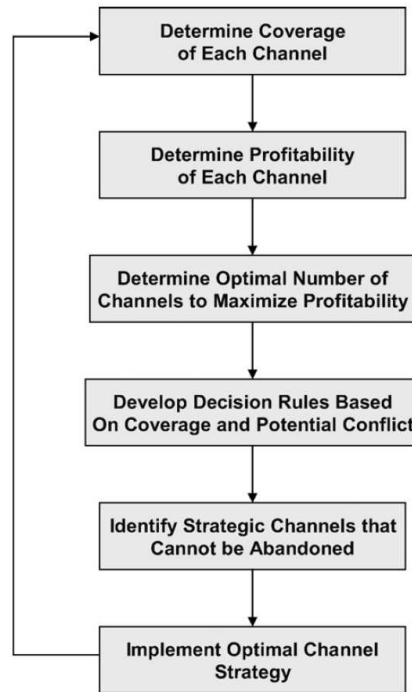


Illustration 2.4.1 – Six steps for selecting an optimal channel mix.

These authors also mention that the selection of adequate channel partners can result in different industry structures. In fact, consumers seek different multiple channels because of the specificities of each one. They expect that each kind of channel fulfils their specific needs. Moreover, each channel lures different kinds of customers according to their personal taste and preference. Balasubramanian, Raghunathan and Mahajan (2005) propose a topic list defining consumers’ preference for the distribution channels:

- Economic objectives
- Pursuit of affirmation

- Figurative meaning correlated with the brands and shopping
- Social interface and empirical impact
- Dependence on and confidence in schemes for purchasing attitudes

These features determine channel selection in three different phases during the purchase process: forming a mind pre-set, product selection and finally purchasing the product. Another interesting fact is that customers who use different channels also demonstrate different loyalty and cross-buying patterns.

The advantages of multi-channel strategies have already been pointed out: higher market coverage, product trial, maximized sales and profits. Exhaustive multi-channel strategies favour market coverage by matching multiple segments' needs at the same time. Some channels are more appealing to a specific kind of customer and, due to this firms can better target their key customer segments. Moreover, customers have the liberty of choice between the different offers in terms of channel selection. Customers who can move freely across multiple channels are more profitable when compared to those who remain attached to one single type of channel. These customers are more active and grant higher revenues and portfolio value. On the other hand, some disadvantages have already been previously identified. Past discussions propose an attempt to utilize as many channel types as possible. Nevertheless, we can find two factors suggesting that unlimited strategy might not be the most efficient. Firstly, additional benefits of incremental resources might not be sufficient to cope with the cost increase (as depicted in Table 2.4.2). Secondly, conflict between channel members could result in bad publicity for the manufacturer's products leading ultimately to poor channel results. Conflict may appear because each entity composing the multi-channel approach will try to reach as many customers as possible. And, this way, the same customer can be approached by more than one channel, creating conflict. This phenomenon can occur with both internal and external channel members of a company. *"For some channel participants, multi-channel strategy may be viewed as a zero sum game: if one channel gains customers then another channel must lose customers"* (Rosembloom, 2006:7). Adding to that, we could point out that customers now can obtain multiple price quotations using other geographical areas, other channels, etc. The most

critical situation is when one channel member spends time and effort on a specific deal with a customer and another channel gets the order. This is also called “*free rider*” (Sharma and Mehrotra, 2006:23). This situation is recurrent when customers contact a salesman to get acquainted with a product’s benefits and characteristics and, once he has done that, he will use the cheap Internet channel to acquire it. There is an estimate which indicates that 20% of customers are free riders. “*In severe cases, higher levels of inter-channel conflict in the context of multi-channels will lead to a reduction in promoting the product or even a withdrawal*” (Sharma and Mehrotra, 2006:23).

- Internationalization Process in an Industrial Environment

There is a recurrent debate about how to define the best channel mix entry mode for companies as they internationalize. In general, there are three main theories: internalization/transaction cost analysis, internationalization and establishment chain models, and interaction network theory (Wheeler, Jones and Young, 1995). Many and important business economists have been interested in the multinational enterprise (MNE) and in the overseas environments surrounding it. For these, the problem consists in the determination of the cost of internalization versus transaction. In this approach, the internalization theory has been applied to the non-productive activities of stock taking, promotion, creation of new accounts and transporting. This type of reasoning is closer to the theory of channel researchers who have applied transaction cost analysis in order to better understand the choice between the use of dealers and external distribution partners and the integration of marketing and distribution activities. It is reasonable to assume that integration is the best choice when companies have the required knowledge of the market and when partners are not available. Integration is therefore adequate when (Rosenbloom, 2007):

- (1) High service level is required, differentiated products are used and activities are not related to the company’s core business;
- (2) Transaction-specific assets are of high value for the sales;
- (3) The geographical distance is low.

When the exporting company is confronted with transaction difficulties, integration may be chosen. Those difficulties arise from market opportunism, restricted rationality and benefit specificity combined with environmental uncertainty. Nevertheless, reliance can diminish distribution costs through opportunism control. If an exporting company cannot trust its dealers, more controlled commercial exchanges administered by a strong and rigid hierarchy are likely to appear. Another way of thinking, but also resulting from the MNE, indicates that the export process results in four subsequent phases: pure exporting, use of distribution agents, use of sales subsidiaries and, finally, overseas production. As the exporting company gains experience in the foreign market, additional alliances can be established. Moreover, the stage of development of the exporting activity can be a viable indicator for the process efficiency.

Johanson and Valhne (1990) consider that once the internationalization process starts, it will tend to proceed independently of whether strategic decisions in that direction are taken or not. The main threats to the exporting process are the lack of experience and knowledge of the overseas market and the non-existence of pre-established commercial networks. If these threats and potential costs are not taken into account within the exporting process, the internationalization/transaction cost paradigm is unable to explain the variances that might occur. If we consider the example of high tech products, the transaction costs during the first stages of the export process are quite high. In this case, companies might not want to evolve beyond dealership arrangements.

Johanson and Valhne (1990) have attempted to extend the internationalization model by linking it to the concept of industrial networks. These authors recognize that the internationalization theory is less adequate in unstable and high technology sectors. Leaders of companies are influenced by other peers and favouring this way the rapid establishment of subsidiaries. There is, however, a recent belief that many manufacturers start the internationalization process almost blindly. Often, this results from the cooperation between the domestic firm and foreign companies. The notions of conflict, cooperation, trust and power resulting from the resource dependency theory have been extensively debated in recent literature about distribution channels and integrated in diverse research.

As previously mentioned, trust has been considered to have the power to decrease transaction costs. For example, if the manufacturer trusts the distributor, commercial transactions can be maintained through time; internationalization might be unnecessary; and, the respective costs could be avoided. This advantage could be diminished should the manufacturer try to use coercive power over the agents.

The industrial network theory also underlines key factors like social relationships, cooperation, conflict and dependence. In the case of unbalanced power and benefit repartition between the manufacturer and dealers, then relationships are likely to breakdown. Hence, conclusions derived from the resource dependency theory might be contradictory. Collected empirical proof has demonstrated diversity if market entry modes and channels of distribution are used. For example, it has been proven that there is a wide variety of servicing strategies considering the industry type, country and even between companies. Supporting these findings, Li, Lam and Qian (2001) analyzed many market servicing modes and discovered that the move from reduced overseas involvement to subsidiary manufacturing was the second most common entry mode. Additionally, servicing strategies in foreign markets of the same firms but in different countries have been demonstrated to be distinct. It is also known that small manufacturers typically use agents and distributors as an exporting method.

Within industrial markets, a typical partner that can often be found is the independent distributor. The predominant characteristics of these partners include small company size; independent ownership and high number of served customers; unwillingness to grow and provide information; and presenting problems in strategic areas. Nevertheless, recent research reveals that their importance in the industrial sector is increasing (Anderson and Narus, 1984; Narus and Anderson, 1987). In reality, the interaction between manufacturers and distribution partners can provide conflict but, at the same time, can be cooperative and fruitful. Nevertheless, if conflict level exceeds the threshold, the relationship might be at risk. This might induce lower satisfaction and efficiency. Ultimately, final customers will not be properly served. Turnbull, Ford and Cunningham (1987) have studied the export strategy of British industries. Many of those, even after some years dedicated to export

activity, had not evolved from distribution using sales representatives and dealers. Some others still used the most primary and basic type of activity: direct selling to the overseas customers. Lastly, some evidence was found of reversal strategies from the use of foreign subsidiaries back to the use of dealers or even back to direct selling. Other available literature also demonstrates that progression, regression and termination of the internationalization process can occur. The internationalization process development is highly influenced by market environment, industry structure and the company's marketing strategy (Turnbull, Ford and Cunningham, 1987). As Kumar and Bergstrom (2008) explain, taking into account the experienced difficulties when trying to vertically integrate international distribution tasks, very often, manufacturers select a mix mode. In the local markets, they are present on a direct basis. In the foreign markets, they use intermediaries. These partners represent a non-expensive and easy solution. They also provide key local representatives with a very good knowledge of the market. These intermediaries provide the necessary and strategic marketing Intel. Lastly, they also provide something very important: potential consumers. The relation between the manufacturer and the intermediary is typically short-term. A manufacturer must compare the distribution effort level between an international branch and a local intermediary. Therefore, the intermediary must operate at lower cost rate. It also should provide experience, information and knowledge concerning trading and exporting. A local partner must be seen as a "competitive advantage". Many of the international markets present specificities, legal and customs barriers and require product customization. These factors favour intermediaries. Despite all this, as the manufacturer learns more and more about the specificities of international markets, its dependency on the intermediaries weakens. Additionally, if the market size grows considerably then the manufacturer will eventually assess the possibility of modifying the export method. The intermediary can be kept but with limited responsibilities or the manufacturer can cancel the existing contract and vertically integrate the distribution operations. This implies, however, a significant investment and effort.

At a given point in time, manufacturers can realize that the channels they use are not the most adequate. However, it might not be possible, economically or logistically, to change

them in a reasonable time frame. It is also possible that external distribution partners might not be available. Conversely, firms can be contractually engaged with external contractors whilst they would prefer to vertically integrate distribution activities. It is very unlikely that companies can find the perfect distribution channel configuration, especially once again, in an international context.

2.5 Channel Satisfaction

- Channel Satisfaction Relevancy

Globalization seems to be the most important factor shaping today's business environment (Schmitz and Wagner, 2007). Imports of products and services currently constitute 24 percent of the gross domestic product worldwide and the majority of industries either already operate in international markets or are planning to do so. With an integrated and global distribution of goods, the international dimension of marketing channels becomes more and more critical. In particular, a manufacturer's ability to maintain effective relationships with distribution partners across national borders has also become a crucial asset. *"Since channel member satisfaction is strongly related to relationship quality and continuity, it is a key characteristic of well-functioning marketing channel relationships. Given that today's competitive environment forces channel members to maintain healthy relationships with each other through focus on joint objectives and mutual understanding, satisfaction in international marketing channels seems more important than ever"* (Schmitz and Wagner, 2007:6). According to the same authors, channel member satisfaction in domestic distribution has been vastly studied. On the other hand, international distribution channels are embedded in a much higher uncertainty and complexity than in domestic markets. Even though various aspects of international marketing channels have already been investigated (Cavusgil, Deligonul and Chun, 2004; Stock and Lambert, 2003), limited experience and knowledge exists regarding the extent of satisfaction in these relationships. *"This kind of knowledge exhibits a substantial managerial relevance, since it reveals to multinational corporations the ultimate relationship needs of foreign channel members and how the fulfilment of these needs actually shapes the trans national cooperation"* (Schmitz

and Wagner, 2007:7). Channel satisfaction is, indeed, a critical factor in order to obtain higher channel commitment (Andaleeb, 1995). Sahadev (2008) writes that the level of satisfaction within a channel and its influence on channel relationships has constituted a critical aspect for channel practitioners and investigators during the last thirty years. There is a current global trend which favours closer and more integrated cooperation between distribution partners and manufacturers. The vast majority of experts recognize that one of the most important factors for reaching total integration of channel activities is the presence of strong commitment towards the channel. As a consequence of this, nowadays, top managers concentrate mostly on creating relationship commitment and insuring it is preserved in time. Referring to Morgan and Hunt (1994) from their influential research on channel commitment, commitment in a relationship is critical to all the relational exchanges existing between companies and their various partners. According to Brown, Lusch and Smith (1991), one can rely on the behavioural features of channel interaction i.e. channel member satisfaction, for three key motives (Brown, Lusch and Smith, 1991:15):

- a) "Satisfaction is widely believed to correlate with the channel's economic performance.*
- b) Channel member satisfaction is critical to creating integrated logistics systems.*
- c) Understanding the determinants of channel member satisfaction is important in its own right."*

Members of the distribution channel that present a good level of satisfaction have higher standards of motivation and confidence. They will tend to cooperate more; will less probably abandon the channel; are less prone to have legal conflicts with other channel members or to look for legislative protection. In this context, a distribution channel will most probably be fit to face shifts in its environment and to compete more effectively against competitors.

- Satisfaction Definition

There is not a clear consensus between theorists about the definition of channel satisfaction, as Andaleeb (1995) indicates. However, satisfaction is considered to be, by many

marketing experts, a general psychological state which describes the emotional condition which results from the interaction with objects, actions or conditions. *“Satisfaction has been regarded as a kind of stepping away from an experience and evaluating it. Satisfaction is not simply the pleasurable nature of an experience, it is the evaluation rendered that the experience was at least as good as it was supposed to be”* (Kim, 1998:225). Moreover, satisfaction of a given channel member is also considered to be the general positive state of mind resulting from the evaluation of diverse features of a company’s professional relationship with some other firm (Andaleeb, 1995). Klein and Roth (1993) suggested that the satisfaction of top management towards their distribution channels is undeniably related to performance of the company itself. Nevertheless, the drivers of satisfaction still require further investigation, namely in the context of international markets. Present satisfaction is an outcome of previous strategic decisions taken. Alternatively, desired satisfaction is a clear precursor of the very same strategic decisions (Klein and Roth, 1993). Foreign legislation, global corporate restrictions, limited resources and capital, previous contractual constraints – these all interfere in the channel strategy. Consequently, channel satisfaction can also result from the extent to which the desired channel structure is attained.

- Satisfaction Measurement

“Despite the popularity of multiple channels, and the numerous authors claiming the need for researching the determinants of such channel strategies, this topic has remained virtually unexplored” Coelho, Easingwood and Coelho (2003:561). According to Wagner and Schmitz (2007:156), *“Satisfaction in international marketing channels is a seven-dimensional construct, comprised of a local channel member’s satisfaction with multinational headquarters’ products, marketing support, order handling, fairness, financial support, communication, and cultural sensitivity. Moreover, channel member satisfaction predicts trust, commitment, and the level of conflict in cross-national channel relationships”*. Satisfaction varies depending on the gap between pursued and perceived outcomes. Some of the main research studies on the paradigm of satisfaction and

dissatisfaction rely upon the expectancy-performance gap model. It quantifies the gap between the desired level of product performance or service quality and the reality perceived by customers and users. The bigger that gap will be, the lower the channel satisfaction will be. As McManus (1975) indicates, in an ideal and perfectly competitive market, channel satisfaction management would be irrelevant because the distribution efforts would be inexistent. Considering that the distribution costs in these markets would be close to zero, restrictions to free market exchange would not exist. Geyskens and Steenkamp (2000) suggested two dimensions for channel satisfaction. These authors define economic and social backgrounds. Economic satisfaction is, therefore, defined as an evaluation established by a channel member on the economic outcome resulting from the relationship with its distribution partners including e.g. sales volume, margins and discount level. On the other hand, social satisfaction is seen as a channel member's judgement of the psychological components of its cooperation with the distribution partner. Recent literature has correlated commitment in channel relationships with satisfaction. In these studies, relationships are analysed in the context of marketing channels, B2B markets and services marketing. *"Theoretical support to consider a direct linkage between satisfaction and commitment in the context of marketing channels is significant"* (Sahadev, 2008:180). Brown, Lusch and Smith (1991:18) mention numerous scales and measures of satisfaction for various empirical settings, as described in Table 2.5.1.

Study	Empirical setting	Sample size	Satisfaction measure
Arndt and Ogaard (1986)	Northern California auto dealers;	85	Overall satisfaction with channel relationship (three items, α -weighted across samples = 0.65)
	Northern California car manufacturers, Zone reps;	56	
	Norwegian auto dealers;	132	
	Norwegian car manufacturers zone reps;	111	
Anderson and Narus (1984)	Small to medium-sized distributors of electronics components	153	Factor score reflective of overall channel satisfaction (three items α =nr)
Brown (1978)	Midwestern automobile dealers	26	Two overall satisfaction with channel relationship items (α = na)
Brown and Day (1981)	Illinois, Indiana, Kentucky and Ohio automobile dealers	210	Overall satisfaction with channel relationship (one item, α = na)
Dwyer (1980)	Simulated buyer-seller dyads	80	Overall satisfaction with channel relationship (14 items, α = 0.94)
Dwyer and Oh (1986)	Hardware dealers	52	Overall satisfaction with channel relationship (five items, α =0.95)
Dwyer and Oh (1987)	Hardware dealers in 13 US cities	189	Overall satisfaction with channel relationship (four items α = 0.93)
Dwyer et al. (1986)	Automobile dealers	34	Overall satisfaction with channel relationship (five items, α = 0.91)
John and Reve (1981)	Heterogeneous Norwegian wholesale-retailer dyads	99	Index of norms of accomplishment as seen by wholesaler/retailer (four items, α = 0.71/0.77)
Reve and Stem (1986)	Heterogeneous Norwegian wholesale-retailer dyads	99	Index of evaluation of accomplishment as seen by wholesaler/retailer (seven/four items, α =0.78/0.77)
Rosenberg and Stern (1971)	Relatively expensive household durables	Manufacturers	Overall satisfaction with channel relationship (two items, α = 0.60)
		Distributors	
		Dealers	
Ruekert and Churchill (1984)	Wholesalers and retailers of consumer batteries and ancillary products	173	Index of beliefs or cognitions about the channel relationship (21 items, α = 0.89); Index directly assessing satisfaction with channel relationship (15 items, α = 0.90); Single item reflecting overall satisfaction
Schul (1987)	Franchised real estate brokers in three central states	391	Overall satisfaction with channel relationship (22 items, α = 0.71)
Schul et al. (1981)	Franchised real estate brokers in Texas, Arkansas and Oklahoma	349	Overall satisfaction with channel relationship (23 items, α = 0.96)
Wilkinson (1981)	Australian hotel managers' perception of hotel-brewer dyads	75	Overall satisfaction with brewer performance (eight items, α = 0.82)

Table 2.5.1 – Examples of satisfaction measures

- Satisfaction Determinants

In his research, Kim (1998) highlights the findings from a survey on Korean electronic export corporations. This author suggests that the strategy involving distribution channels is defined taking into account the level of commitment and risk. According to this author, distribution strategies can be modified at any time. Nevertheless, inadequate decisions may generate poor results during the entry phase. Hence, channel satisfaction is higher when the chosen strategy suits the exporting market characteristics. When companies decide to

initiate an exporting activity, there are two main decisions to be taken. Primarily, is the exporting market going to generate higher benefits than alternative options? Secondly, it is important to identify, before anything else, what are the most suitable entry modes or distribution strategies. As distribution channel strategies are diverse in their nature, consequently, the level of commitment and risk is also different. As already mentioned, bad decisions inevitably generate poor results and low satisfaction due to weak performance of the distribution function on the exporting market. If the strategy set up at the beginning was not the best one or market environment and conditions have shifted, the whole distribution structures may be at risk. Many international firms experience important setbacks while trying to change the distribution channel strategy. Consequently, they feel tempted to maintain the present channels. Adding to this, international channel structures are very difficult to alter due to several aspects like foreign legislation and mentality, lack of human resources, capital investment, etc. For the time being, available research on satisfaction of international distribution channels demonstrate that top management's satisfaction is directly correlated to the channel's operational performance. Also according to Kim (1998), satisfaction among channel members increases the morale and cooperation. It also reduces dysfunctional conflict. With a higher preponderance in international markets, controlling misconduct and behavioural attitudes between channel members is very difficult. This is one of the reasons why in an ideal world firms would opt to use a direct sales force in international markets. But instead, because of low sales volume, high start-up costs and high risk, they are forced to utilize distributors. Brown et al. (1991) state that the interaction outcomes between channel members integrate economic performance indicators e.g. effectiveness, efficiency and profitability. Furthermore, it includes behavioural aspects such satisfaction throughout the distribution channel.

In this business activity, cooperation and interactivity resulting in positive relationship between channel members are critical to proportionate just-in-time inventory and excellent quality goods or services. Distribution costs reflect to a great extent the general channel satisfaction level. They are the result of an imperfect market that requires monitoring and control of contractual alliances and compliance. The idea that inferior transaction costs

generate greater satisfaction is based on the reasoning that lower transaction costs improve commercial and channel performance (Kim, 1998). Satisfaction is, therefore, a consequence of improved performance.

2.6 Channel Performance

According to Coelho, Easingwood and Coelho (2003), channel performance analysis is fundamental from a marketing and organisational standpoint. This factor potentially supports and has a real impact on the fulfilment of the organisational objectives and strategies. The use of multiple channel strategies is getting more frequent in terms of distribution strategy, becoming a popular trend. Considering the limited experience on the use of this new strategy, it is very important to understand how it influences key channel performance indicators. In Coelho, Easingwood and Coelho's (2003) study, channel performance was defined as a multi-level construct. So that many aspects of the general term performance could be measured, both quantitative and qualitative indicators were utilized.

Sales are one of the most important features to analyze, from a company point of view. It is so because they have the most important impact on the organisation's performance and dictates its survival. Additional aspects that could be taken into account: conquering new customers, market share and sales growth. Another important indicator is profitability. For this purpose, it is required to include profit and control of distribution costs. As to the extent of qualitative aspects, we could analyze customer service level and customer retention.

“Channel performance is a multi-dimensional construct. In order to tap the varied facets of performance, both quantitative and qualitative indicators were used. A major concern for every company is sales, given its impact on the organisation's performance. In this context, the study considered the following criteria: gaining new customers, market share and sales growth. Another major issue involves profitability, and therefore the study included profit and control of distribution costs. In terms of qualitative aspects, the study considered

customer service and customer retention” (Coelho, Easingwood and Coelho, 2003:565). Two clear dimensions result from the statistical analysis performed in their study. The first one is classified as sales performance, as all items relate to sales targets. The second is “profitability”, as higher cost performance and customer retention result in more profits. Customer service may also enable organisations to charge higher margins, enhancing profitability. These two main dimensions are depicted on Table 2.6.1 (Coelho, Easingwood and Coelho, 2003:565).

Criteria	Dimensions
Getting new customers	Sales performance
Market share	
Sales growth	
Customer retention	Profit performance
Profit	
Customer service	
Cost control	

Table 2.6.1 – Channel performance indicators

Alternatively, nine components were identified by Gilmour (1999:357), within five categories, to measure performance:

Categories	Components
1. Strategy and organisation	Customer relationship
	Customer segmentation
2. Planning	Replenishment planning
	Inventory deployment planning
3. Business process and information	Order taking process;
	Order tracking system;
	Order management system;
	Customer queries
4. Product flow	Nil
5. Measurement	Customer satisfaction

Table 2.6.2 – Categories for measuring performance

From this example we can see that these categories provide a guideline for future channel performance analysis. In the research conducted by Photis (2004:73), the key indicators utilised to measure a firm’s performance were:

- “1. Profitability compared to business unit objectives*
- 2. Profitability compared to industry average*
- 3. Market share compared to business unit objectives*
- 4. Market share compared to major competitor*
- 5. Sales growth compared to industry average*
- 6. Sales volume compared to business unit objectives*
- 7. Return on investment compared to industry average*
- 8. Overall assessment of company’s performance compared to industry average”*

Bellhouse and Hutchinson (1993) have conducted a comprehensive brainstorming session to identify all possible channel characteristics which could be relevant. Over 25 significant characteristics were identified, of which the most important (in no particular order) were:

- *“Primary business area (what they sell)*
- *How they sell*
- *Expertise level*
- *Profitability*
- *Long-term business potential*
- *Growth potential*
- *Size of organization*
- *Size of sales of organization*
- *Level of commitment to customers*
- *Level of commitment to suppliers*
- *Typical size of individual business deals*
- *Significance/presence in the marketplace*
- *Level of discount required*
- *Value added in the sales process*
- *Support requirements (technical and commercial)”*, Bellhouse and Hutchinson (1993:24).

2.7 Summary Discussion

In this Chapter, a Literature Review was made. Several themes were debated providing the necessary context and supporting the research development. The first part referred to general literature about Distribution Channels (Stock and Lambert, 1983; Griffith, 2005; Cabaniss, 1995; Kim and Frazier, 1996; Sanzo and Trespacios, 2000 and Gilmour 1999). Then, it proceeded with an exposition about the international markets context in order to understand the environment where the Manitowoc Company operates, the market constraints and the respective underlying opportunities (Lee, Knight and Kim, 2008; Beattie, 2006; Stock and Lambert, 1983; Samiee and Walters, 2006; Beverland, 2005). Since the Manitowoc Company commercializes several product or service brands, a multi-brand environment was also explored and dedicated literature summarized: definition and importance of the brand, the multinational context and brand analysis (Davis, Golobic and Marquardt, 2009; Martinez and Pina, 2003; Wood, 2000; Lee, Knight and Kim, 2008; Dillon et al., 2001; Keller, 1993; Oliver, 1998). Another important aspect that was debated is the industrial background of Manitowoc and the consequences on its industrial and B2B distribution channels design: the importance of channels' design (Coelho, Easingwood and Coelho, 2003); the Internet contribution (Sharma and Mehrotra, 2006; Rosenbloom, 2007); multi-channel strategies (Rosenbloom, 2007; Myers, Pickersgill and Van Metre, 2004; Stone, Hobbs and Khaleeli, 2002; Payne and Frow, 2004; Sharma and Mehrotra, 2006; Balasubramanian, Raghunathan and Mahajan, 2005) and the internationalization process in an industrial environment (Wheeler, Jones and Young, 1995; Rosenbloom, 2007; Johanson and Valhne, 1990; Li, Lam and Qian, 2001; Anderson and Narus, 1984; Narus and Anderson, 1987; Turnbull, Ford and Cunningham, 1987; Kumar and Bergstrom, 2008). A vital contribution to this research was the available literature about channel satisfaction. Therefore, several components were identified and explained: channel satisfaction relevancy (Schmitz and Wagner, 2007; Cavusgil, Deligonul and Chun, 2004; Stock and Lambert, 2003; Andaleeb, 1995; Sahadev, 2008; Morgan and Hunt, 1994; Brown, Lusch and Smith 1991); the definition of satisfaction (Andaleeb, 1995; Kim, 1998; Klein and Roth, 1993); the measurement of satisfaction (Coelho, Easingwood and Coelho, 2003;

Wagner and Schmitz, 2007; McManus, 1975; Geyskens and Steenkamp, 2000; Sahadev, 2008; Brown, Lusch and Smith, 1991); and also the determinants of satisfaction (Kim, 1998). Finally, the performance of distribution channels was presented. The knowledge about channel performance was extracted, in this way supporting the adopted analysis of method (Coelho, Easingwood and Coelho, 2003; Gilmour, 1999; Photis, 2004; Bellhouse and Hutchinson, 1993).

3. Research Problem and Hypothesis

Introduction

In this Chapter, the research problem is formulated within the context of Manitowoc. Independent and dependent variables emerging from the problem question are identified. Moreover, a conceptual frame work is illustrated in order to understand the interaction between these independent and dependent variables. Finally, the research hypotheses are set up and focused to respond to the research problem.

3.1 Research Problem

The essential focus of this research proposal is trying to answer the following question: “what is the policy that generates the highest customer satisfaction and trust, brand identity and profitability in the long term, in terms of distribution channels, for a multi branded construction equipment manufacturer serving international markets: a standard and common strategy applied in every region; a set of individual market adapted strategies tailored to each region/country or a hybrid solution composed by the previous two?”

This question starts by referring to the term “customer satisfaction and trust” because a company must be customer-centred in order to succeed in a competitive world (Kim, 1998). Additionally, a strong “brand identity” is one of the most important assets a company possesses (Martinez and Pina, 2003). We include here also “profitability” (Sharma and Mehrotra, 2007; Coelho, Easingwood and Coelho, 2003; Photis, 2007) because the point is not to formulate a solution that maximizes turnover while enormously increasing the cost of operations and thus minimizing profit. The goal is rather to identify a policy which maximizes profit and the company’s value to the stakeholders. Another important aspect is that this “profitability” must be considered on a medium/long term basis. There is no interest of companies being profitable today and becoming bankrupt some time after.

The term “multi-branded construction equipment manufacturer” (Martinez and Pina, 2003; Lee, Knight and Kim, 2008; Dillon *et al.*, 2001) indicates that we will try to assess the case of manufacturers who build construction equipment, e.g. cranes, and use individual brands per type of product or application.

From a company point of view, it is crucial to determine the best solution for its own distribution channels; the solution that could be the most profitable and serving the best interests of the company. Once we have done that, we will be ready to answer the problem question. However, in order to obtain this crucial information, we need firstly to establish the research hypothesis. This will be obtained through the combination of different variables.

3.2 Research Hypothesis

Coming again to the title of this thesis, “Distribution channels in a multi-brand environment: a uniform or a market adapted policy?”, we can immediately identify three independent variables (inputs): distribution channel types used by Manitowoc (direct force sales, dealer or sales representative); the type of brand and the geographical area.

On the other hand, it is possible to identify 3 outputs, dependent variables, as individual interactions of each input:

- Customer Satisfaction and Trust, supported by Kim (1998); Coelho, Easingwood and Coelho (2003); Schmitz and Wagner (2007).
- Brand Identity, supported by Lee, Knight and Kim (2008).
- Channel Performance, supported by Gilmour (1999); Bellhouse and Hutchison (2007); Stock and Lambert (1983).

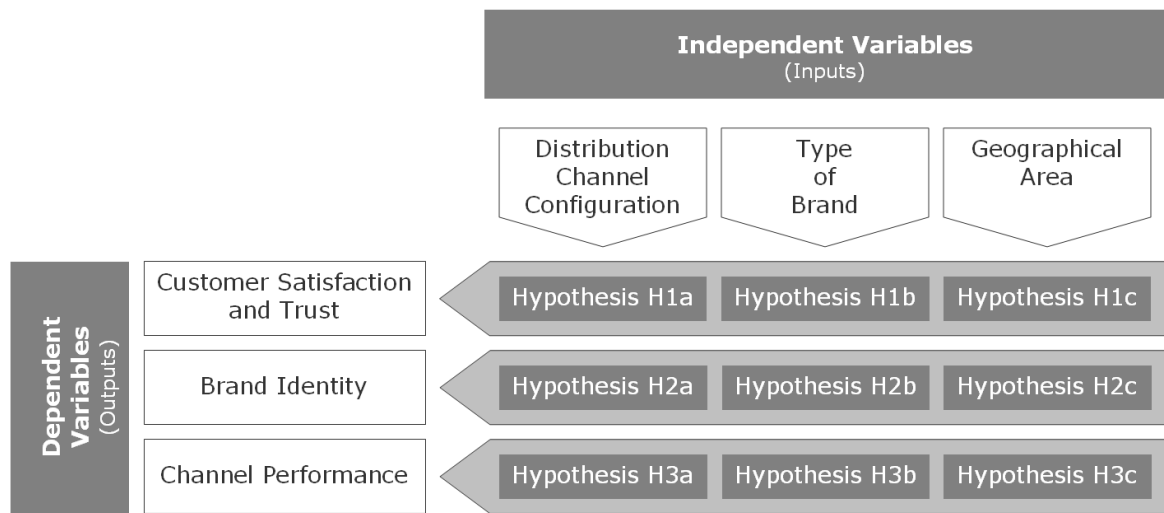


Illustration 3.2.1 – Combination between independent variables (inputs) resulting in 3 different dependent variables (outputs)

The description of the research hypothesis is as follows.

3.2.1 Customer Satisfaction and Trust

Kim (1998:231) concludes in his work that *“there is no reason to believe that either the level of channel integration or any particular channel structure will be generally appropriate or engender higher satisfaction than any other channel structure”*. This statement supports H1a.

H1a: Customer satisfaction and trust is independent from the distribution channel type.

One of the objectives of this research is to evaluate the impact of the distribution channel configuration and geographical area on customer satisfaction and trust. Nevertheless, knowing that Manitowoc commercializes diverse brands, we assume that this output is independent from the brand, in order to simplify the research problem. Logically, this hypothesis has to be verified.

H1b: Customer satisfaction and trust is independent from the brand.

Acknowledging that distribution channel's structure and type vary according to the considered geographical area in the context of the Manitowoc Company, if we consider Kim's (1998:231) statement mentioned above, it is valid to assume that satisfaction and trust is independent from the geographical area.

H1c: Customer satisfaction and trust is independent from the geographical area.

3.2.2 Brand Identity

As based below on hypothesis H2c, country has an effect on shaping Brand Identity. Acknowledging the fact that the distribution channel type varies according to the considered country or sales area, we can here also assume that the distribution channel type also impacts Brand Identity.

H2a: Distribution channel type has a main effect on Brand Identity.

As Lee, Knight and Kim (2008) indicate, consumers in different countries see products and brands in a different way. In developing regions, global brands are considered not only to deliver high quality but also to enhance the emotional retribution connected to status and esteem. Conversely, consumers in developed countries consider that their domestic brands possess better quality and value than global brands. Based on this:

H2b: Brand type used has a main effect on Brand Identity.

The next hypothesis is concerned with the main effects of country and brand type on the construct. According to Lee, Knight and Kim (2008), the forming of brand identity of global and domestic brands is expected to vary across countries. Therefore:

H2c: Geographical area used has a main effect on Brand Identity.

3.2.3 Channel Performance

Bellhouse and Hutchison's (2007:569) research indicates that "*higher channel performance was observed among the single channel cases*". This statement supports hypothesis H3a.

H3a: Distribution channel type has a main effect on Channel Performance.

In the case of the Manitowoc Company, channel performance's key indicators, like sales, distribution costs and profit, are accounted considering the commercialization of all product types (brands) together. Hence, it is not possible to assess channel performance per type of brand. Moreover, all geographical areas can potentially sell all brands resulting in an even more complex research hypothesis to investigate. In order to simplify the research, let us assume here the following hypothesis:

H3b: Channel performance is independent from the brand.

Acknowledging that distribution channel's structure and type vary according to the considered geographical area in the context of the Manitowoc company, if we consider Bellhouse and Hutchison's (2007:569) statement mentioned above, it is valid to assume that channel performance is higher when single channel type is used.

H3c: Sales Area has a main effect on Channel Performance.

H1i and H2i can be validated through a simple questionnaire surveying customers. H3i can be obtained by analyzing financial data and economical results of Manitowoc.

3.3 Summary Discussion

In this Chapter, we formulated the research problem within the context of the available scientific literature and that of Manitowoc's. Independent and dependent variables emerging from the problem question were identified and also designated as "inputs" and "outputs", respectively. Moreover, a conceptual frame work was illustrated in order to understand the interaction between these independent and dependent variables. Finally,

different research hypotheses were set up and referenced for each combination between independent and dependent variables. Furthermore, the research hypotheses were supported by the available scientific literature.

4. Methodology

Introduction

In this Chapter, the design of the research, its deployment and planning are presented and detailed. The research population is also identified. The construct measurement, the correspondent set of variables, questionnaire and scales are presented and supported by the literature review. Finally, the adopted statistical techniques are also described.

4.1 Research Design

According to Malhotra (2010), research design can be classified into to the following types and subtypes:

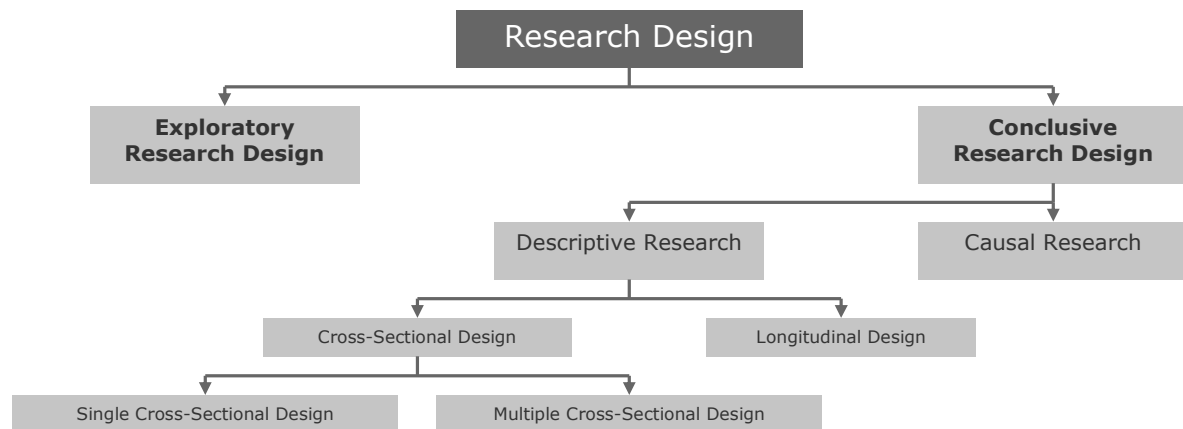


Illustration 4.2.1 – Classification of Marketing Research Designs

The present research will have a conclusive design, featuring a formal and structured construct. It will be based on the targeted population. The obtained data will be subjected to quantitative analysis. The findings will also be conclusive in nature and set up as an input into managerial decision-making.

Additionally, the research will be descriptive to the extent that it will explain something. It will try to better understand the phenomena by observing in detail the elements which

compose it hence providing an empirical basis sustaining the final argumentation. In addition, it focuses mainly on “what” and “how”. Generally, descriptive research is performed on small scales, qualitative yet formal, which is the present case (Malhotra, 2010). The research will also will try to explain the reason “why” phenomena occur; demonstrate relations and associations between facts and finally suggest multi-levelled laws to events, through research hypotheses and quantitative data analysis, composing the basis for the subsequent formation of action plans. Malhotra (2010), in his work, indicates that there is a diverse span of survey methods:

Telephone Interviewing	Traditional
	Computer Assisted
Personal Interviewing	In-Home
	Mall Intercept
	Computer-Assisted
Mail Interviewing	Mail
	Mail Panel
Electronic Interviewing	E-mail
	Internet

Table 4.2.1 – Classification of Survey Methods

This study was initiated in September 2009 and terminated in June 2010. The selected methods to actualize the research were E-Mail and Internet interviews (electronic interviewing) to gather cross-sectional data (Kim, 1998). The survey was composed by the following documents:

- A covering letter providing the necessary context and instructions for filling in (current document)
- A questionnaire generated by a Word document to be opened and edited
- An alternative online questionnaire accessed through an Internet link
- A “pdf” document with the ISO International Country Code List

All those documents (except the last one) were available in 8 languages:

- English

- French
- German
- Italian
- Spanish
- Portuguese
- Russian
- Dutch

Translations had to be provided by usual suppliers that currently collaborate with Manitowoc. For the Indian market, the English language was adopted. For the Chinese market, the documents needed to be translated into Chinese by local Manitowoc staff. The survey phase started on February 17th 2010 and the deadline to return the completed questionnaires was March 31st 2010.

As previously mentioned, data sources were composed by:

- Manitowoc's historical financial archives;
- Information collected from Manitowoc's final customers and cranes end-users within the EMEA Region, India and China;

In order to validate the structure of the questionnaire and to assess the comprehensibility and assertiveness of the questions, 5 targeted customers were personally interviewed. These customers were selected taking into account their extensive experience and knowledge of Manitowoc products and services. These firms were located in Sweden (one), in Denmark (one), in the United Kingdom (two) and in Portugal (one). Interviews revealed no problems with the various questions and with the structure of the questionnaire.

4.2 Research Population

This study targets final customers of the Manitowoc Company in the EMEA area (Europe, Middle East and Africa). Final costumers and end users would be the primary target

because they represent the very end of the distribution channel. Typically these can be construction companies, with diverse sizes and experience. Rental companies were also included in the research population because they also use, erect, dismantle and maintain the equipment. Target informants were equipment and top managers, both contributing with different points of view.

In this business sector, customers' information and contacts typically belong to dealers. Dealership contracts have been established a long time ago, do not define any rules regarding customer information exchange and, in some cases, do not even exist. Consequently, Manitowoc only possesses information about direct customers and dealers. Nevertheless, it was possible to obtain customer data using the following sources:

- Sales recorded during 2007, 2008 and 2009
- Manitowoc CSI¹ records obtained during 2009

The last source contained information (company's name, contact person's name, function and E-mail) of direct final customers and also customers of our dealers. Additional contacts were obtained through companies' websites available on the Internet.

Finally, an extensive list containing 486 final customers and 7 rental companies was compiled. This means that our sample matches the targeted population. By the end of March 31st 2010, 52 responses to the survey were collected within the EMEA research population.

¹ The Customer Satisfaction Index (CSI) is an economic indicator that measures the satisfaction of consumers. The CSI was started in 1994 by researchers at the National Quality Research Center, University of Michigan and was based on a model originally implemented in 1989 in Sweden called the Swedish Customer Satisfaction Barometer (SCSB). Both the Swedish version and the ACSI were developed by Claes Fornell, now the Donald C. Cook Professor of Business Administration at the University of Michigan, and chairman of CFI Group.

EMEA Sales Area	# Customers	# Responses
Africa	42	0
Benelux	14	1
Central Europe	113	10
Russia & CIS	16	0
France & DomTom	124	4
Iberica	61	14
Middle East	18	0
North Europe & the UK	47	9
South Europe	58	14
Total	493	52

Table 4.2.1 – Responses per Sales Area

Parallel to the survey performed in the EMEA region, Manitowoc's marketing top management decided to extend the survey to the Americas (North and South) and APAC (Asia and Pacific) regions. However, the Americas' main dealers were strongly opposed to the deployment of the current study in their region. This way, only APAC was included in the survey. Therefore, it was possible to obtain some additional 64 responses, counting 38 from India and 26 from China. Unfortunately, it was not possible to determine the population dimension of final customers and rental companies in the APAC region.

Hence, the final sample is composed of 116 responses, 52 from EMEA and 64 from APAC.

4.3 Construct Measurement

Most questions of the questionnaire used seven-point Likert-type¹ scale. A benefit of this scale is that questions used are usually easy to understand, leading to consistent answers.

¹ The Likert scale was named after its creator, the psychologist Rensis Likert. It is a psychometric scale commonly used in questionnaires and the most widely used scale in survey research. It asks respondents to

Another advantage of the seven-point scale compared to the five-point is that more options are offered and respondents tend to identify more easily the most suitable one according to their judgement (Malhotra, 2010). Moreover, additional literature also uses the seven-point Likert-scale, e.g., Klein and Roth (1993). The questionnaire was composed by three main sections:

Questionnaire Section	Description	Related to Output	Related to Research Hypotheses
A	General information from the responding company	-	-
B	Customer evaluation of the Manitowoc distribution partner and channel	Customer Satisfaction and Trust	H1a; H1b; H1c
C	Customer evaluation of Manitowoc brands	Brand Identity	H2a; H2b; H2c

Table 4.3.1 – Questionnaire’s general structure

4.3.1 Questionnaire Section A

In Section A, the researcher asked each respondent to provide some general background information about their company e.g. geographic area, type of activity, company size (number of employees, capital stock and turnover) and experience (number of years in business). These items were also used by Kim (1998:228) as indicated on Table 4.3.2 henceforward.

choose a specific category that best fit the rated feature or object. When responding to a Likert questionnaire item, respondents specify their level of agreement to a statement.

1.5 a) Number of employees		Less than 10	☐
		10-100	☐
		More than 100	☐
1.5 b) Amount of capital stock	☐ € ☐ US \$	Less than 1 million	☐
		1-20 million	☐
		More than 20 million	☐
1.5 c) Annual sales	☐ € ☐ US \$	Less than 10 million	☐
		10-100 million	☐
		More than 100 million	☐
1.5 d) Number of years in business		Less than 10	☐
		10-20	☐
		More than 20	☐

Table 4.3.2 – Questionnaire Question 1.5: General background information about the respondent company

Respondents were also invited to identify the type of products each company consumes or uses and the kind of distribution partner serving his company (Manitowoc Direct Sales Force, dealer or sales representative), as shown on Table 4.3.3.

Brands	Manitowoc (crawler cranes)	Potain (self erecting and top slewing cranes)	Grove (all terrain and rough terrain cranes, industrial cranes)	National Crane (truck and truck mounted cranes)	Shuttlift (industrial cranes)	CraneCare (service, technical support, training, parts)
Manitowoc Direct Sales Force (MDSF)	☐	☐	☐	☐	☐	☐
Dealer	☐	☐	☐	☐	☐	☐
Sales Representative	☐	☐	☐	☐	☐	☐

Table 4.3.3 – Questionnaire Question 1.6: Consumed products and distribution partner used

4.3.2 Questionnaire Section B

Section B aimed to evaluate the output customer satisfaction and trust in the distribution channel, assessing research hypothesis H1i. The available literature allows us to consider the following items for customer satisfaction (Kim, 1998; Wagner and Schmitz, 2007; Gilmour, 1999:357; Bellhouse and Hutchinson, 1993:24) and trust (Schmitz and Wagner, 2007:23; Photis, 2007:73) in the distribution channel at two different levels:

- a) Distribution partner's performance;
- b) The distribution channel configuration as a whole.

Customers were firstly invited to rank, on Section B1, on a seven-point Likert "agree-disagree" scale, the following features about their distribution partner:

Section B1 – Distribution Partner Evaluation	
Item	Questionnaire's statement (i = 1,2,3)
Business management: customer queries	2.i.1 "I am satisfied with the responses I get to the commercial queries/tenders I ask for"
Business management: order taking process	2.i.2 "I am satisfied with the way that my commercial orders are dealt"
Business management: partner organization	2.i.3 "I am satisfied with the way my Manitowoc's distribution partner is organized"
Lead time (time between customer's order and equipment reception)	2.i.4 "I consider the lead time (between my order confirmation and equipment's reception) to be reasonable"
Pricing policy	2.i.5 "I am satisfied with the pricing policy applied to my company"
Discount policy	2.i.6 "I am satisfied with the discount policy applied to my company"
Experience	2.i.7 "My Manitowoc's distribution partner has a good experience in the crane business"
Technical knowledge	2.i.8 "My Manitowoc's distribution partner has a good technical knowledge about the crane product and service"
Technical support provided (training, special requirements)	2.i.9 "My Manitowoc's distribution partner provides all the technical support I need (training, technical-commercial, etc)"
Service quality level	2.i.10 "I am satisfied with the service quality level provided to my company"
Customer Segmentation (if the channel and product offer suits customer's needs)	2.i.11 "My Manitowoc's distribution partner offers me all the crane products and service solutions I require to do my business"
"Way of doing business" compliance	2.i.12 "My Manitowoc distribution partner's "way of doing business" is adapted to the local/national legislation"
Importance of "Way of doing business" compliance	2.i.13 "It is important that my Manitowoc distribution partner's "way of doing business" is adapted to the local/national legislation"
Local mentality adaptability	2.i.14 "My Manitowoc distribution partner's "mentality" is adapted to the local/national mentality"
Importance of local mentality adaptability	2.i.15 "It is important that my Manitowoc distribution partner's "mentality" is adapted to the local/national mentality"
Adaptability to environment/economical shifts	2.i.16 "My Manitowoc's distribution partner can easily adapt to environmental/economical shifts"
Relationship level/friendliness	2.i.17 "I share with my Manitowoc's distribution partner a good relationship level/friendliness"
Conflict level	2.i.18 "I have a low level of conflict with my Manitowoc's distribution partner"
Commitment towards distribution partner	2.i.19 "I feel committed towards my Manitowoc's distribution partner"

Table 4.3.4 – Questionnaire Section B1: Distribution Partner evaluation items

As mentioned previously, respondents were then invited to evaluate the distribution channel as a whole and using the same scale. Item 2.4.2 (Global satisfaction with the distribution channel) accounts for the “satisfaction” sub-output assessment and the other three accounts for the “trust” sub-output assessment.

Section B2 – Channel Evaluation	
Item	Questionnaire’s statement
Trust on the distribution channel	2.4.1 “I trust on my Manitowoc’s distribution channels”
Global satisfaction on the distribution channel	2.4.2 “I am globally satisfied with my Manitowoc’s distribution channels”
Willingness to change the distribution channels configuration	2.4.3 “I would be willing to change my Manitowoc’s distribution channels”
Willingness to promote Manitowoc’s products to a third party	2.4.4 “I would be willing to promote Manitowoc’s crane products and service to a third party”

Table 4.3.5 – Questionnaire Section B2: Channel evaluation items

In Table 4.3.6 below, we can summarize the individual item contribution for forming satisfaction and trust sub-outputs and, subsequently, the general satisfaction output.

Item (i = 1,2,3)		Customer Satisfaction and Trust Output	
		Satisfaction	Trust
2.i.1	Business management: customer queries	☒	☐
2.i.2	Business management: order taking process	☒	☐
2.i.3	Business management: partner organization	☒	☐
2.i.4	Lead time (time between customer's order and equipment reception)	☒	☐
2.i.5	Pricing policy	☒	☐
2.i.6	Discount policy	☒	☐
2.i.7	Experience	☒	☐
2.i.8	Technical knowledge	☒	☐
2.i.9	Technical support provided (training, special requirements)	☒	☐
2.i.10	Service quality level	☒	☐
2.i.11	Customer Segmentation (if the channel and product offer suits customer's needs)	☒	☐
2.i.12	"Way of doing business" compliance	☒	☐
2.i.13	Importance of "Way of doing business" compliance	☒	☐
2.i.14	Local mentality adaptability	☒	☐
2.i.15	Importance of local mentality adaptability	☒	☐
2.i.16	Adaptability to environment/economical shifts	☒	☐
2.i.17	Relationship level/friendliness	☒	☐
2.i.18	Conflict level	☒	☐
2.i.19	Commitment towards distribution partner	☒	☐
2.4.1	Trust in the distribution channel	☐	☒
2.4.2	Global satisfaction on the distribution channel	☒	☐
2.4.3	Willingness to change the distribution channels configuration	☐	☒
2.4.4	Willingness to promote Manitowoc's products to a third party	☐	☒

Table 4.3.6 – Individual item contribution for “satisfaction” and “trust” sub-outputs

4.3.3 Questionnaire Section C

The last section of the questionnaire aimed to evaluate the “Brand Identity” of each brand. Research hypothesis H2i could therefore be assessed. Customers were invited to rank, on a seven-point Likert “agree-disagree” scale, the following features for each brand used and in accordance to what has been suggested by Lee et al. (2008:166):

Section C – Brand Identity		
Dimension	Sub-dimension	Questionnaire's statement
Brand Specific Association	Emotional Value	3.i.1 "Provides to me what I expect from it"
		3.i.2 "I feel reassured because it will provide what I need"
		3.i.3 "Give me satisfaction to use it"
		3.i.4 "Make me want to use it"
		3.i.5 "Easy to use"
	Perceived quality	3.i.6 "Be reliable"
		3.i.7 "Be durable"
		3.i.8 "Be high quality"
General Brand Impression	Brand awareness	3.i.9 "I can recognize this brand among competing brands"
		3.i.10 "I am aware of this brand"
		3.i.11 "I can quickly recall the symbol or logo of this brand"
	Brand image	3.i.12 "Have good reputation"
		3.i.13 "Be prestigious brand"
Brand Commitment	Brand loyalty	3.i.14 "I am loyal to this brand"
		3.i.15 "This brand is my first choice among competing brands"
	Purchase intention	3.i.16 "I intend to buy this brand frequently"
		3.i.17 "I plan to buy this brand more often"

Table 4.3.7 – Questionnaire Section C: Brand Identity evaluation items

4.3.4 Channel Performance Assessment

Finally, as proposed by Gilmour (1999), Bellhouse and Hutchison (1993), the assessment of research hypothesis H3i, channel performance, could be obtained by analyzing the following market and financial indicators extracted from Manitowoc's historical financial archives:

- Turnover (gross sales)
- Cost
- Profit or net income before taxes (margin)
- Profit/cost ratio

Regarding cost, according to Johnston and Marshall (2006), the most popular and traditional technique of identification is the full-cost approach. In this type of approach, the general accounting principle is the following:

Sales

Less: Cost of goods sold

Equal: Gross margin

Less: General administrative and selling expenses

Equal: Profit or net income before taxes

The term “cost” is reserved generally for the materials, labour, power, rent and other various items necessary to manufacture the goods. On the other hand, the term “expenses” reflects other costs generated by business activity e.g. advertising, salaries, maintaining branches, etc. For this purpose, the list of general administrative and selling expenses taken into account for the current research was (Johnston and Marshall, 2006: 391):

Functional Cost Group	Description
Selling – Direct Costs	Personal calls by sales people and supervisors on accounts and prospects; sales salaries, incentive compensation, travel and other expenses
Selling – Indirect Costs	Field supervision, field sales office expense, sales administration expenses, sales personnel training, sales management; market research
Advertising	Media costs such as TV, radio, billboards, newspapers, magazine; advertising production costs; advertising department salaries
Sales Promotion	Consumer promotions such as coupons, patches, premiums; trade promotions such as price allowances, point-of-purchase displays, cooperative advertising
Transportation	Railroad, truck, barge, etc., payments to carriers for delivery of finished goods from plants to warehouses and from warehouses to customers; traffic department costs
Storage and Shipping	Storage of finished goods inventories in warehouses; rent (or equivalent costs), public warehouse charges, fire insurance and taxes on finished goods inventories, etc. physical handling, assembling, and loading out of rail cars, trucks, barges for shipping finished products from warehouses and mills to customers; labour, equipment, space and material costs.
Order Processing	Checking and processing of orders from customers to mills for prices, weights and carload accumulation, shipping dates, coordination with production planning, transmittal to mills, etc; pricing department; preparation of customer invoices; freight accounting; credit and collection; handling cash receipts; provision for bad debts; salary, supplies, space, and equipment costs (fax machines, printers, etc.)

Table 4.3.8 – Functional cost groups and bases of allocation

In the case of Manitowoc Company, the sales expenses are allocated according to Table 4.3.9 below. The data collected from Manitowoc's financial archives will have the following configuration:

Department	Item
Central Sales Administration	Total
Used Equipments	Total
General Sales	Total
Branch Sales Expenses	Employee Related Expenses
	Building & Equip Expenses
	Marketing Expenses
	Professional Services
	Tax & Penalties
	Travel & Entertainment Exp
	Miscellaneous Expenses
	Total

Table 4.3.9 – Manitowoc Sales Expenses allocation

4.4 Statistical Techniques

All collected data, included on responses to the questionnaire, was inputted on SPSS¹ (Software Package for Social Sciences) software. With regard to Sample Profile analysis, general descriptive statistic features were used: number of responses, means, standard

¹ SPSS is a computer program used for statistical analysis. SPSS (originally, Statistical Package for the Social Sciences) was released in its first version in 1968 after being developed by Norman H. Nie and C. Hadlai Hull. Norman Nie was then a political science postgraduate at Stanford University, and now Research Professor in the Department of Political Science at Stanford and Professor Emeritus of Political Science at the University of Chicago. SPSS is among the most widely used programs for statistical analysis in social science. It is used by market researchers, health researchers, survey companies, government, education researchers, marketing organizations and others. The original SPSS manual has been described as one of "sociology's most influential books". In addition to statistical analysis, data management (case selection, file reshaping, creating derived data) and data documentation (a metadata dictionary is stored in the datafile) are features of the base software.

deviation, minimum and maximum values. The considered general confidence interval is 95%.

On the other hand, concerning the dependent variables (outputs) analysis, a more structured statistical analysis method is applied. The main objective is to validate or reject the different Research Hypotheses. In order to do so, it is required to analyze the variation of the dependent variables (Customer Satisfaction and Trust, Brand Identity and Channel Performance), by varying each independent variable (Distribution Channel Type, Brand and Sales Area). This structured statistical analysis consists of the following procedures:

- a) Determine the new factors for Customer Satisfaction & Trust and Brand Identity, through Factorial Analysis and Factor Reduction. This technique will allow us to reduce the number of scale dimensions and will simplify the analysis of results. In order to test the sampling adequacy, the Kaiser-Meyer-Olkin's (KMO) factor is calculated and the accepted minimum value for the KMO factor is 0,5. The Bartlett's Test of Sphericity is also performed (significance level of 1%). The new factors are extracted using the Extraction Method of Principal Components and are based on eigenvalues greater than 1. The considered maximum number of iterations for convergence is 25. Lastly, Varimax was used as Rotation Method. The obtained new factors were saved as new variables on SPSS.
- b) Evaluate the scale reliability by using the Reliability Statistics and calculating the Cronbach's alpha¹ of each new factor. The minimum considered value for the Cronbach's alpha value is 0,7 for minimum scale internal consistency.

¹ Cronbach's α (alpha) is a statistic commonly used as a measure of internal consistency or reliability. It was initially named as alpha by Lee Cronbach in 1951, as he intended to continue with further coefficients. Cronbach's alpha statistic is widely used in many disciplines, e.g. social sciences, business studies and psychology.

c) Make a One-way ANOVA¹ test to analyze if groups have equal means within the population. The variance and the relationship are checked between two variables at a time: an independent nominal variable that has more than 2 categories and a dependent variable which is continuous or a interval ratio. Post Hoc tests are performed in the event that the ANOVA test is statistically significant. For equal variances assumed (Levene test for equality of variances), we select Scheffe Post Hoc comparison for groups with unequal size and Tukey Post Hoc comparison for groups with equal size. For equal variances not assumed, we select Tamhane's T2 Post Hoc comparison. The selected significance level is 0,05. The ANOVA Statistics include: descriptive, homogeneity of variance test, Brown-Forsythe, Welch and means plot. In Illustration 4.4.1, a sequence of the analysis is showed. The assumptions we take into account for the ANOVA tests are:

- (i) Independence of data between and within groups: this is guaranteed because sample and responses were obtained randomly across the population and samples were also independently chosen from one group to the other.
- (ii) Normality: the scores must be normally distributed around the mean of the dependent variable (checked in SPSS case by case using Normality tests).
- (iii) Homogeneity of variance: the groups must have equal variances (checked in SPSS case by case).

¹ In statistics, analysis of variance (ANOVA) is a collection of statistical models, and their associated procedures, in which the observed variance is partitioned into components due to different sources of variation. In its simplest form, ANOVA provides a statistical test of whether or not the means of several groups are all equal, and therefore generalizes Student's two-sample t-test to more than two groups. ANOVAs are helpful because they possess a certain advantage over a two-sample t-test. Doing multiple two-sample t-tests would result in a largely increased chance of committing a type I error. For this reason, ANOVAs are useful in comparing three or more means.

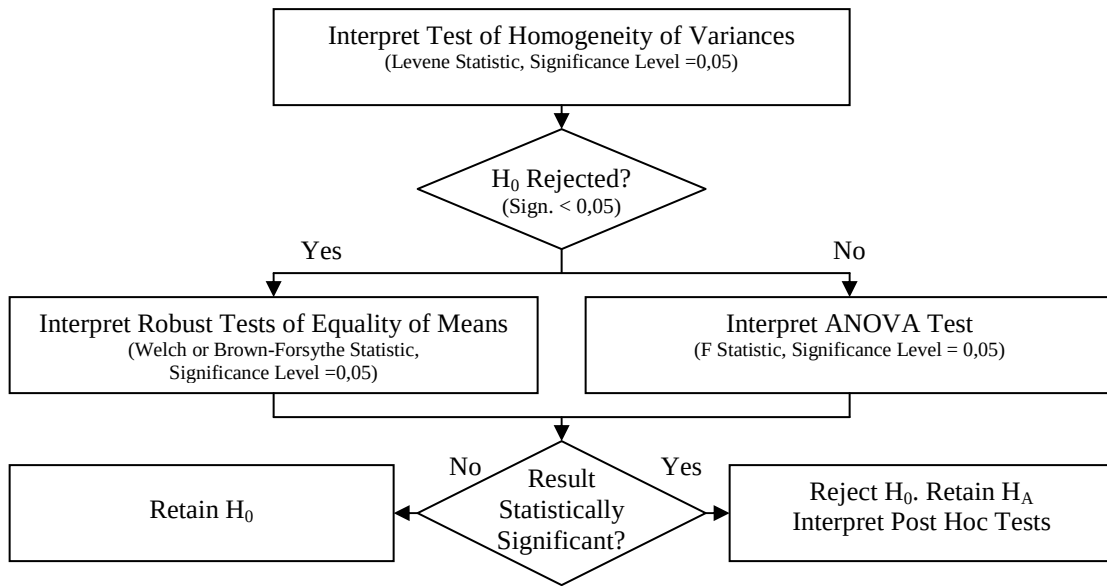


Illustration 4.4.1 – One-way ANOVA analysis sequence

4.5 Summary Discussion

This Chapter started by describing the design of the research. The type and survey method of research were selected. The step-by-step practical deployment of the research within Manitowoc was presented. The planning and time frame of the research was also included in this section. We have, then, identified the research population and number of responses per sales area. Concerning the construct measurement, we have defined 3 main dimensions to measure each dependent variable or “output”: Customer Satisfaction and Trust, Brand Identity and Channel Performance. Both variable measurement and scales are supported by the scientific literature. The adopted questionnaire was detailed and divided into 3 main sections: general background information about the respondent company, distribution partner and channel configuration evaluation and brand identity evaluation. Therefore, the questionnaire aimed to measure the first 2 variables: Customer Satisfaction and Trust and Brand Identity. Additionally, the measurement method of the last variable, Channel Performance, was defined and also supported by the scientific literature. Finally, the adopted statistical techniques were also described.

5. Results and Discussion

Introduction

This Chapter starts by characterizing the profile of the companies that responded to the questionnaire. The research sample profile is thus established. Descriptive statistics, such as frequencies, mean, standard deviation, minimum and maximum values, are used to characterise Customer Satisfaction and Trust and Brand Identity items that were included in the questionnaire.

The Chapter continues by addressing Customer Satisfaction and Trust and Brand Identity analysis. Statistical procedures are presented and the variables are then decomposed through factor reduction. The analysis proceeds with the interaction between Customer Satisfaction and Trust and Brand Identity dependent variables (outputs) with the 3 independent variables (inputs). Statistical results are presented and conclusions are formulated. The research hypotheses are, finally, supported or rejected. This will allow us to draw the necessary managerial conclusions.

The last section of this Chapter is dedicated to analyzing the interaction between Channel Performance dependent variable (output) with the 3 independent variables (inputs). Statistical results are presented and conclusions are formulated. The research hypotheses are, lastly, supported or rejected. This will allow us to draw the necessary managerial conclusions.

5.1 Sample Profile

The sample profile is characterized in Table 5.1.1, below:

Variable	Category	Frequency	Percent
Region	EMEA	52	44,8
	APAC	64	55,2
	Total	116	100,0
Country	AO – Angola	1	,9
	CH – Switzerland	1	,9
	CN – China	26	23,3
	DE – Germany	6	5,2
	DK – Denmark	2	1,7
	ES – Spain	4	3,4
	FR – France	2	1,7
	GB – Great Britain	6	5,2
	GR – Greece	1	,9
	HR – Hungary	1	,9
	IN – India	38	32,8
	IT – Italy	11	9,5
	LU – Luxemburg	2	1,7
	MG – Madagascar	1	,9
	NL – Netherlands	1	,9
	PL – Poland	1	,9
	PT – Portugal	9	7,8
	RO – Romania	1	,9
	SE – Sweden	1	,9
	Total	116	100,0
Type of Activity	End User	72	63,7
	Rental Company	31	27,4
	Other	10	8,8
	Total	113	100,0
Number of Employees	Less than 10	13	11,4
	10-100	49	43,0
	More than 100	52	45,6
	Total	114	100,0
Annual Capital Stock	Less than 1 million US dollars	16	15,4
	Between 1 and 20 million US dollars	38	36,5
	More than 20 million US dollars	50	48,1
	Total	104	100,0
Annual Sales	Less than 10 million US dollars	25	24,8
	Between 10 and 100 million US dollars	42	41,6
	More than 100 million US dollars	34	33,7
	Total	101	100,0
Years in Business	Less than 10	20	17,9
	Between 10 and 20	15	13,4
	More than 20	77	68,8
	Total	112	100,0

Table 5.1.1 – Sample Profile characterization¹

¹ Questionnaire's Question from 1.2 to 1.5

Analyzing the obtained data, 52 companies from EMEA and 64 companies from APAC responded to the survey. This represents 44,8% and 55,2% of the sample respectively, as indicated in Table 5.1.1. Regarding respondent companies per country, countries with the highest number of responses are India with 38, followed by China with 27. Acknowledging that only two countries from the APAC region account for 55,2% of the total number of responses, it allows us to conclude right away that customers in this area are less reluctant in responding to this type of questionnaire and tend to be more cooperative with marketing research.

Focusing more in detail on the EMEA area (Table 5.1.2), the highest response rates belong to South Europe (SUD) with 24,14%, Iberica (IBE) with 22,95% and North Europe and the United Kingdom (NUK) with 19,15%. South Europe includes countries like Greece, Italy and Romania. Iberica includes countries like Angola, Spain and Portugal. North Europe and the United Kingdom includes Denmark, Great Britain, Norway, Finland and Sweden.

Sales Area	Final Customers	Rental Companies	Total	Responses	Response Rate
AFR (1)	42	0	42	0	0,00%
BLX (2)	12	2	14	1	7,14%
CEN (3)	113	0	113	10	8,85%
CIS (4)	16	0	16	0	0,00%
FRA (5)	119	5	124	4	3,23%
IBE (6)	61	0	61	14	22,95%
MID (7)	18	0	18	0	0,00%
NUK (8)	47	0	47	9	19,15%
SUD (9)	58	0	58	14	24,14%
Total EMEA	486	7	493	52	10,55%
APAC (10)	-	-	-	64	-
Total Global	-	-	-	116	-

Table 5.1.2 – Response rate per Sales Area

Returning to Table 5.1.1, the great majority of companies responding to the survey are “end users” with 72 responses (63,7%) while only 31 companies are dedicated to the rental

activity (27.4%). Only 10 companies (8,8%) perform other type of activities. It is interesting to conclude that, at least, 88,6% (43 + 45,6) of the respondent companies are medium and large companies. Roughly half of Manitowoc's customers have more than 100 employees.

The same principle applies to the capital stock spending, where 48,1% of the respondent companies invest more than 20 million US dollars. 36,5% of companies spend between 1 and 20 million US dollars and only 13,8% spend less than 1 million US dollars. It is easy to conclude that, construction or rental companies typically being Manitowoc's final customers and end users, these types of activities require a large investment in equipment. However, there is a growing and steady trend that construction companies tend to spend less on equipment, more often renting this kind of equipment.

On the other hand, in terms of annual sales, a higher percentage of Manitowoc's customers correspond to medium sized companies, generating an annual turnover between 10 and 100 million US dollars. This class includes 41,6% of the sample. Nevertheless, 33,7% of the companies generate more than 100 million US dollars each year and around 24,8% less than 10 million US dollars.

It is also interesting to analyze that the majority (68,8%) of Manitowoc's customers have very long business experience, with more than 20 years. Only 13,4% have an experience between 10 and 20 years and 17,9% with less than 10 years. The result of this fact is that the market tends to be dominated by the most experienced companies and new ones have many difficulties conquering their place in the market.

One of the first and main conclusions that can be drawn from the sample profile analysis is that, typically, Manitowoc customers tend to be large companies, with more than 100 employees, with high capital stock spending exceeding 20 million US dollars, generating an annual turnover between 10 and 100 million US dollars and with more than 20 years of experience.

Brand		Manitowoc Direct Sales Force	Dealer	Sales Representative	Total
Manitowoc	Frequency	9	14	1	24
	Percent	37,5	58,3	4,2	100,0
Potain	Frequency	47	17	0	64
	Percent	73,4	26,6	0	100,0
Grove	Frequency	25	18	1	44
	Percent	56,8	40,9	2,3	100,0
National Crane	Frequency	1	0	0	0
	Percent	100,0	0,0	0,0	100,0
Shuttlelift	Frequency	13	3	1	17
	Percent	76,5	17,6	5,9	100,0
CraneCare	Frequency	39	12	2	53
	Percent	73,6	22,6	3,8	100,0

Table 5.1.3 – Product Brand versus Distribution Channel Type¹

The last topic of this section focuses on the type of consumed products versus the type of distribution channel used to serve customers (Table V.1.3). Within the population sample, the most frequently used brand is Potain, with 64 answers. The second most frequently used brand is CraneCare, with 53 responses, followed by Grove, with 44 answers. The less frequently used brands are Manitowoc (24 answers), Shuttlelift (17 answers) and National Crane (only 1 answer). With regard to distribution channel type, the most frequently used is “Manitowoc Direct Sales Force”, Manitowoc products being the single exception. The second most frequently used is “Dealer” and the last one is “Sales Representative”.

5.2 Descriptive Statistics

In this section, general descriptive statistics from the full sample are presented. Data analysis is performed varying only one variable at a time.

¹ Questionnaire’s Question 1.6

5.2.1 Customer Satisfaction and Trust

In Table 5.2.1 we can observe the descriptive statistics relative to the evaluation made by respondents on their direct Manitowoc distribution partner. Number of responses, means, standard deviations, minimum and maximum values are presented individually for each distribution partner.

Item (i = 1,2,3)	N			Mean			Std. Deviation			Min			Max		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
2.i.1 Business management: customer queries	79	47	7	5,9	5,5	5,1	1,5	0,9	1,1	1	4	4	7	7	7
2.i.2 Business management: order taking process	79	48	7	5,5	5,4	4,6	1,5	1,0	1,0	1	3	3	7	7	6
2.i.3 Business management: partner organization	76	48	7	5,9	5,5	5,3	1,5	1,1	1,7	1	3	3	7	7	7
2.i.4 Lead time (time between customer's order and equipment reception)	79	47	7	4,8	4,4	4,6	1,6	1,4	1,3	1	2	3	7	7	6
2.i.5 Pricing policy	78	48	7	4,3	3,6	4,1	1,2	1,5	1,1	1	1	3	7	7	6
2.i.6 Discount policy	78	48	7	4,4	3,5	4,0	1,3	1,5	1,2	1	1	3	7	7	6
2.i.7 Experience	78	47	7	5,9	6,0	5,0	1,2	1,0	1,6	2	3	2	7	7	7
2.i.8 Technical knowledge	79	48	7	6,0	6,1	5,0	1,5	1,0	1,6	1	3	2	7	7	7
2.i.9 Technical support provided (training, special requirements)	77	47	7	6,0	5,6	5,0	1,4	1,0	1,6	1	3	2	7	7	7
2.i.10 Service quality level	78	48	7	5,5	5,3	5,1	1,6	1,1	1,1	1	1	4	7	7	7
2.i.11 Customer Segmentation (if the channel and product offer suits customer's needs)	78	47	7	5,6	4,8	5,1	1,7	1,1	1,1	1	2	4	7	7	7
2.i.12 "Way of doing business" compliance	78	48	7	5,9	5,7	5,1	1,3	0,8	1,3	2	4	3	7	7	7
2.i.13 Importance of "Way of doing business" compliance	78	48	7	6,3	5,8	5,1	1,0	0,9	1,3	3	4	3	7	7	7
2.i.14 Local mentality adaptability	78	48	7	6,0	5,7	5,4	1,3	0,9	1,4	2	4	3	7	7	7
2.i.15 Importance of local mentality adaptability	79	47	7	6,3	5,8	5,0	1,1	0,8	1,3	2	4	3	7	7	7
2.i.16 Adaptability to environment/economical shifts	77	48	7	5,7	5,0	5,3	1,5	1,0	1,7	1	1	2	7	7	7
2.i.17 Relationship level/friendliness	79	48	7	6,3	6,0	5,4	1,3	0,8	1,9	1	4	2	7	7	7
2.i.18 Conflict level	79	47	7	5,8	5,8	5,1	1,6	1,0	1,8	1	4	2	7	7	7
2.i.19 Commitment towards distribution partner	69	48	5	5,8	5,3	5,4	1,5	1,0	1,1	1	4	4	7	7	7

A – Manitowoc Direct Sales Force ; B – Dealer ; C – Sales Representative

Table 5.2.1 – Distribution Partner Evaluation¹

We can find in Table 5.2.1 the evaluation customers made on the distribution channel partner. It is quite clear to conclude that, considering the whole population sample, the evaluation mean of satisfaction items is always higher when a Manitowoc Direct Sales

¹ Questionnaire's Question 2.1, 2.2 and 2.3

Force is used. The second highest mean corresponds always to the use of Dealer and the lowest mean corresponds to the use of Sales Representatives.

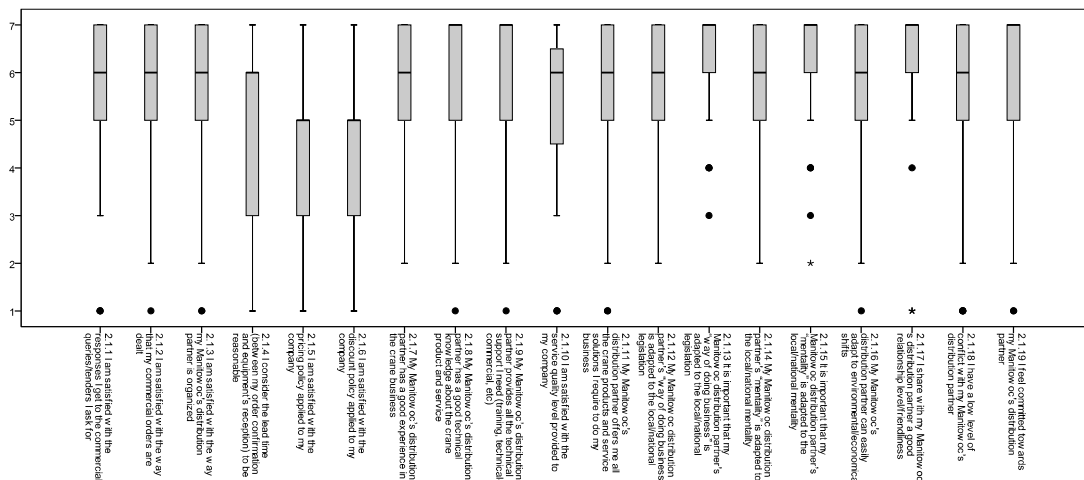


Illustration 5.2.1 – Distribution Partner Evaluation: MDSF¹

On Illustration 5.2.1, it is evidenced that satisfaction on items 2.1.4 (Lead Time – 4,8), 2.1.5 (Pricing Policy – 4,3) and 2.1.6 (Discount Policy – 4,4) are less appreciated when a Manitowoc Direct Sales Force is used. Item 2.1.10 (Service Quality Level – 5,5) also presents a lower result. 10 outliers were identified for all 17 items.

¹ Questionnaire's Question 2.1; Likert scale: 1 – Strongly Disagree; 7 – Strongly Agree

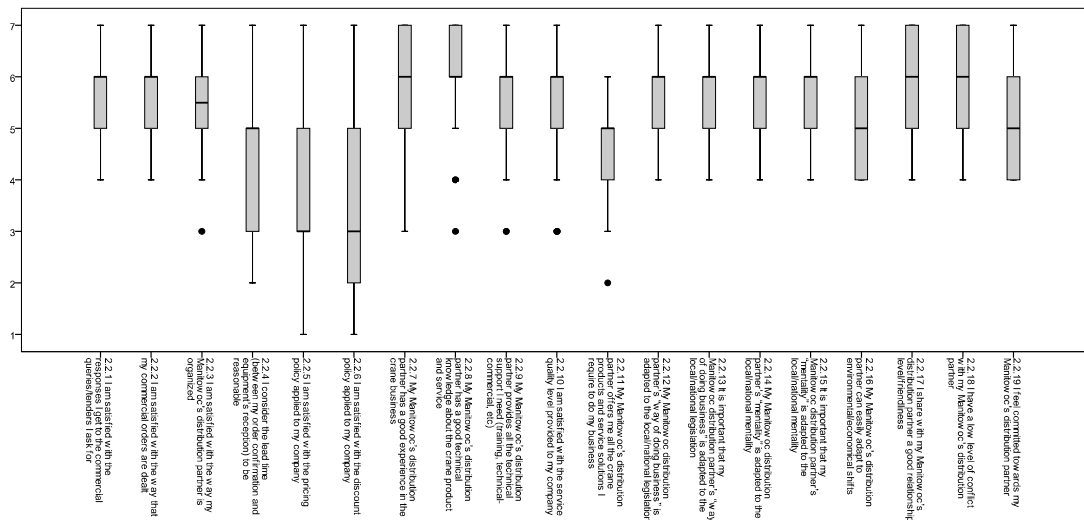


Illustration 5.2.2 – Distribution Partner Evaluation: Dealer¹

In Illustration 5.2.2 it is evidenced that lower satisfaction is systematically obtained when a dealer is used. Almost every item has a poorer result, especially 2.2.4 (Lead Time – 4,4), 2.2.5 (Pricing Policy – 3,6) and 2.2.6 (Discount Policy – 3,5). In fact, this proves that customers are more satisfied with the prices and discounts presented by the Manitowoc Direct Sales Force than the ones practiced by Dealers. Worthy of note is also item 2.2.11 (Crane Product and Service Solutions Availability– 4,8) with a lower result. The conclusion is that, when compared to a Manitowoc Direct Sales Force, Dealers are less capable of presenting all products and services that customers wish for. Finally but very importantly nevertheless, when compared to Manitowoc Direct Sales Force, customers feel less committed towards Dealers. 6 outliers were identified for all 17 items.

¹ Questionnaire's Question 2.2; Likert scale: 1 – Strongly Disagree; 7 – Strongly Agree

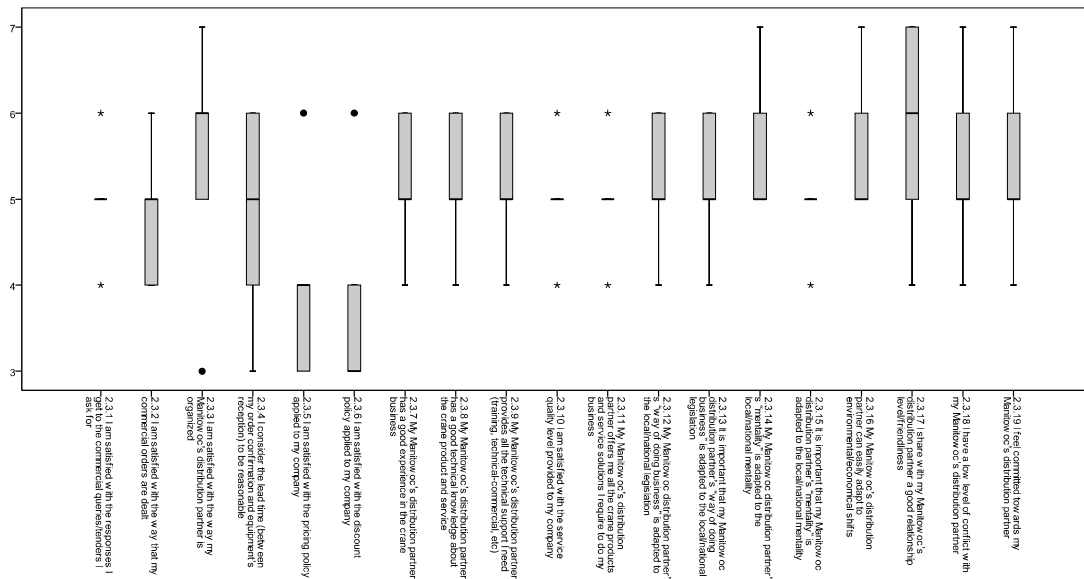


Illustration 5.2.3 – Distribution Partner Evaluation: Sales Representative¹

Analyzing Illustration 5.2.3, satisfaction items concerning Sales Representatives are even lower than the ones obtained for Dealers. A very low number of responses (only 5), however, make these results less representative. Even so, we could mention that items 2.3.5 (Pricing Policy – 4,1) and 2.3.6 (Discount Policy – 4,0) prove a considerable level of dissatisfaction when Sales Representatives are used. 2 outliers were identified for all 17 items.

On Table 5.2.2 we can see the descriptive statistics relative to the evaluation made by respondents on the distribution channels global configuration of Manitowoc. Number of responses, means, standard deviations, minimum and maximum values are presented.

¹ Questionnaire's Question 2.3; Likert scale: 1 – Strongly Disagree; 7 – Strongly Agree

Statement	N	Mean	Standard Deviation	Minimum	Maximum
2.4.1 I trust in my Manitowoc's distribution channels	112	5,8	1,4	1	7
2.4.2 I am globally satisfied with my Manitowoc's distribution channels	98	5,6	1,4	1	7
2.4.3 I would be willing to change my Manitowoc's distribution channels	97	2,7	1,5	1	6
2.4.4 I would be willing to promote Manitowoc's crane products and service to a third party	109	5,2	1,5	1	7

Table 5.2.2 – Channel Evaluation

The satisfaction mean is 5,6, allowing us to consider that customers are relatively satisfied with the channel configuration. Concerning trust, general trust presents a mean of 5,8 and willingness to change 2,7, allowing us to consider that customers trust in and do not want to change the channel configuration. The willingness to promote Manitowoc products has a mean of 5,2, evidencing a lower will on this item.

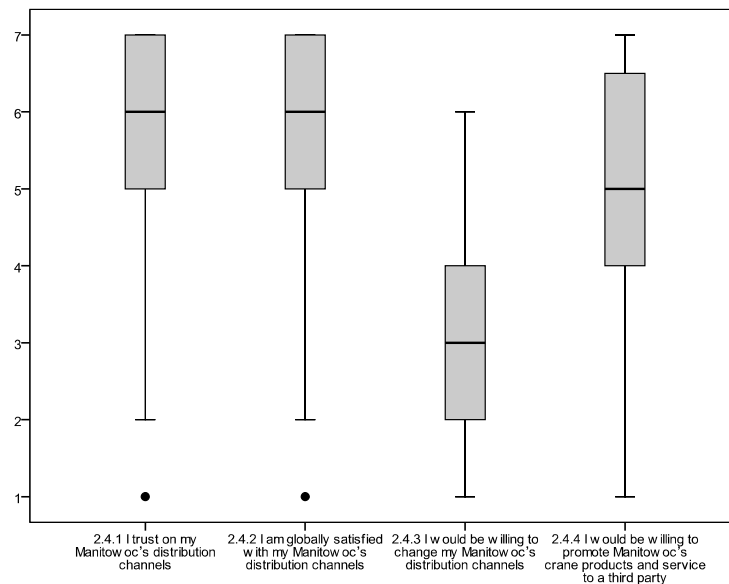


Illustration 5.2.4 – Channel Evaluation¹

¹ Questionnaire's Question 2.4; Likert scale: 1 – Strongly Disagree; 7 – Strongly Agree

Illustration 5.2.4 shows that, in general and analyzing the whole sample, customers are generally satisfied with and trust in the Manitowoc's distribution channel network. They state unwillingness to change it and the way they are served. Moreover, customers are on average willing to promote Manitowoc's products and services to peers and third parties. There is, nevertheless, a lower level of enthusiasm on this last topic. One outlier was identified, presenting a very low level of trust and satisfaction with the distribution channel configuration.

5.2.2 Brand Identity

In Table 5.2.5 we can see the descriptive statistics of Brand Identity evaluation. The various Manitowoc product and service brands are concerned. Number of responses, means, standard deviations, minimum and maximum values are presented individually for each brand.

Dimension	Sub-dimension	Questionnaire's statement	N						Mean						Std. Deviation						Min						Max					
			A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F
Brand Specific Association	Emotional Value	3.1.1 Provides to me what I expect from it	24	64	44	1	17	70	5.3	5.9	5.5	1.0	4.9	5.4	1.1	1.0	1.1	.	0.5	1.6	3	2	1	1	3	1	7	7	1	5	7	
		3.1.2 I feel reassured because it will provide what I need	24	64	44	1	17	69	5.1	5.7	5.5	1.0	4.9	5.4	1.2	1.3	1.1	.	0.5	1.5	1	1	1	1	3	1	6	7	1	5	7	
		3.1.3 Give me satisfaction to use it	24	64	43	0	17	68	5.1	5.7	5.4	0.0	5.7	5.5	1.4	1.2	1.3	0.0	1.0	1.3	1	1	1	0	5	1	7	7	0	7	7	
		3.1.4 Make me want to use it	24	64	44	1	17	68	5.3	5.7	5.4	1.0	5.6	5.6	1.1	1.2	1.3	.	1.2	1.3	3	1	2	1	3	1	7	7	1	7	7	
		3.1.5 Easy to use	24	63	44	0	17	68	4.6	5.7	5.2	0.0	5.7	5.5	1.3	1.2	1.2	0.0	1.0	1.4	2	1	2	0	5	1	6	7	0	7	7	
Perceived quality		3.1.6 Be reliable	24	63	44	0	17	71	5.3	5.9	5.3	0.0	5.2	5.7	1.5	1.3	1.5	0.0	1.6	1.4	1	1	1	0	3	2	7	7	0	7	7	
		3.1.7 Be durable	24	63	44	0	17	72	5.5	6.0	5.4	0.0	5.7	5.9	1.2	1.1	1.3	0.0	1.6	1.2	2	2	2	0	3	3	7	7	0	7	7	
		3.1.8 Be high quality	24	64	43	0	17	72	5.3	5.9	5.3	0.0	4.5	5.9	1.4	1.1	1.6	0.0	0.9	1.3	2	2	1	0	3	3	7	7	0	5	7	
		3.1.9 I can recognize this brand among competing brands	25	64	44	1	17	67	5.3	6.4	5.7	3.0	6.1	5.8	1.4	0.9	1.2	.	1.0	1.4	1	4	2	3	5	1	7	7	3	7	7	
General Brand Impression	Brand awareness	3.1.10 I am aware of this brand	25	64	44	1	17	67	5.4	6.3	5.8	2.0	6.1	5.9	1.5	0.8	1.2	.	1.0	1.4	1	4	2	2	5	1	7	7	2	7	7	
		3.1.11 I can quickly recall the symbol or logo of this brand	25	64	44	1	17	66	5.4	6.0	5.8	2.0	6.1	5.6	1.4	1.1	1.3	.	1.0	1.4	1	1	2	2	5	1	7	7	2	7	7	
		3.1.12 Have good reputation	25	63	44	1	17	69	5.5	6.2	5.4	2.0	5.2	5.7	1.4	0.9	1.2	.	1.6	1.4	1	4	2	2	3	3	7	7	2	7	7	
	Brand image	3.1.13 Be prestigious brand	25	63	44	1	17	69	5.5	6.2	5.5	1.0	5.7	5.7	1.4	1.0	1.1	.	1.0	1.5	1	3	3	1	5	1	7	7	1	7	7	
		3.1.14 I am loyal to this brand	23	61	44	0	17	67	4.4	5.9	4.8	0.0	5.9	5.5	0.8	1.0	1.5	0.0	1.2	1.3	3	3	2	0	3	2	7	7	0	7	7	
Brand Commitment	Purchase intention	3.1.15 This brand is my first choice among competing brands	23	57	42	0	17	64	4.4	6.0	4.7	0.0	5.7	5.4	0.9	0.9	1.5	0.0	1.6	1.4	3	4	1	0	3	2	7	7	0	7	7	
		3.1.16 I intend to buy this brand frequently	23	56	42	1	17	64	4.3	5.7	4.6	2.0	5.4	5.3	1.0	1.1	1.4	.	1.5	1.4	1	3	1	2	3	1	6	7	2	7	7	
		3.1.17 I plan to buy this brand more often	24	58	42	1	17	65	4.5	5.6	4.7	1.0	5.7	5.4	0.9	1.0	1.3	.	1.0	1.3	3	3	2	1	5	1	7	7	1	7	7	

BRANDS: A – Manitowoc ; B – Potain ; C – Grove ; D – National Crane ; E – Shuttlelift ; F – CraneCare

Table 5.2.5 – Brand Identity Analysis (Questions from 3.1 to 3.6)

From Table 5.2.5 we can identify 3 different levels of Brand Identity including the 6 different analyzed product brands: Manitowoc, Potain, Grove, National Crane, Shuttlelift and CraneCare. The first level corresponds to Potain which presents the highest mean scores for all Brand Identity items. Supporting this result even more, Potain collected the highest number of responses, alongside with CraneCare. An interesting result to analyze is that Potain's Perceived Quality (Reliability – 5,9; Durability – 6,6; Quality – 5,9); Brand Awareness (Recognition – 6,4; Awareness – 6,3; Recollection – 6,0); and Brand Image (Reputation – 6,2; Prestige – 6,2) received very high mean scores. Also worth mentioning, Brand Loyalty (Brand is my 1st choice) had an average score of 6,0. This fact leads us to conclude that Potain presents the strongest Brand Identity amongst Manitowoc brands. The second level of brand identity includes Manitowoc, Grove, Shuttlelift and CraneCare with lower but still positive score means. We could highlight, for instance, Shuttlelift's Brand Awareness (Recognition – 6,1; Awareness – 6,1; Recollection – 6,1) also presenting high mean scores. Manitowoc and Grove brands did not collect any item mean score higher than 5,5 and 5,8, respectively, resulting in a relatively poor Brand Identity. The third level corresponds to National Crane which had one single response. This was, unfortunately, insufficient to define the Brand Identity of National Crane.

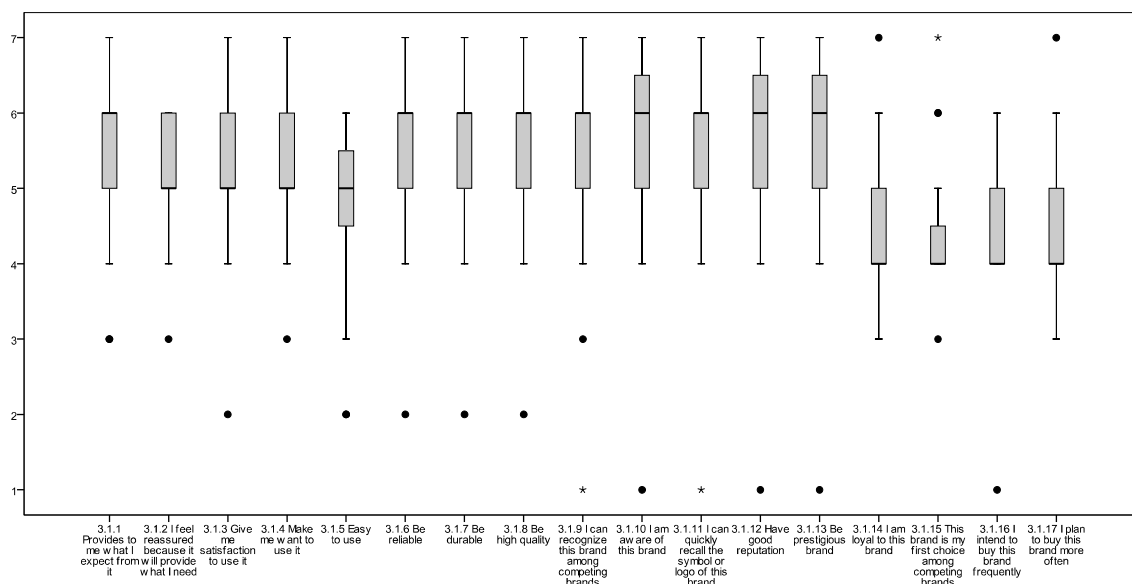


Illustration 5.2.5 – Brand Identity Evaluation: Manitowoc¹

For the Manitowoc brand, as showed in Illustration 5.2.5, it is interesting to note the lower mean scores on item 3.1.5 (Easiness of Use – 4,6), items from Brand Loyalty (Loyalty – 4,4 and First Choice – 4,4) and items from Purchase Intention (Purchase Intention – 4,3 and Plan to Purchase – 4,5). Seven outliers were identified for all 17 items.

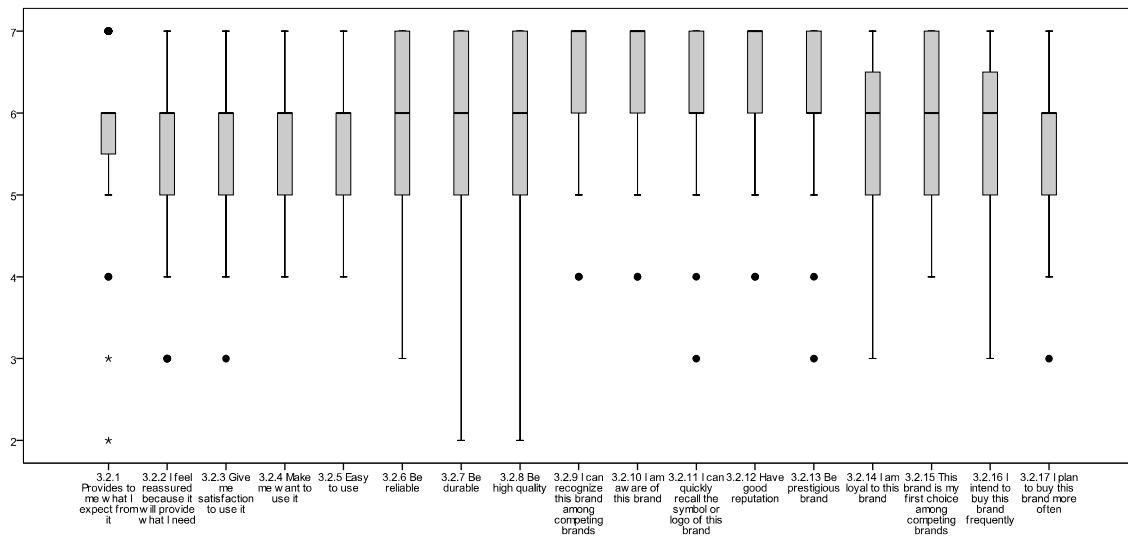


Illustration 5.2.6 – Brand Identity Evaluation: Potain²

As already mentioned, Potain collects the highest mean scores for all Brand Identity items, has depicted in Illustration 5.2.6. Still worthy of note are exceptional items like Perceived Quality, Brand Awareness and Brand Image. Ten outliers were identified for all 17 items.

¹ Questionnaire's Question 3.1; Likert scale: 1 – Strongly Disagree; 7 – Strongly Agree

² Questionnaire's Question 3.2; Likert scale: 1 – Strongly Disagree; 7 – Strongly Agree

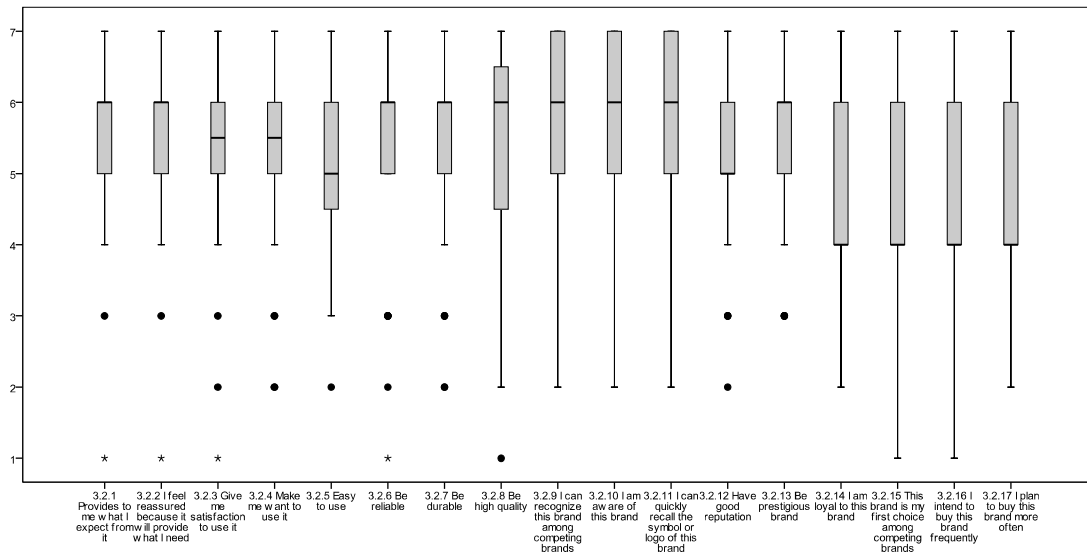


Illustration 5.2.7 – Brand Identity Evaluation: Grove¹

When compared to Potain, Grove receives lower mean scores (Illustration 5.2.7). Nevertheless, items relative to Brand Awareness are still well appreciated (Recognition – 5,7 and Awareness – 5,8 and Recollection – 5,8). Brand Loyalty (Loyalty – 4,8 and First Choice – 4,7) and Purchase Intention (Purchase Intention – 4,6 and Plan to Purchase – 4,7) items receive the lowest scores. Ten outliers were identified for all 17 items.

National Crane had only one response and, therefore, Brand Identity would be statistically insignificant if formulated.

¹ Questionnaire's Question 3.3; Likert scale: 1 – Strongly Disagree; 7 – Strongly Agree

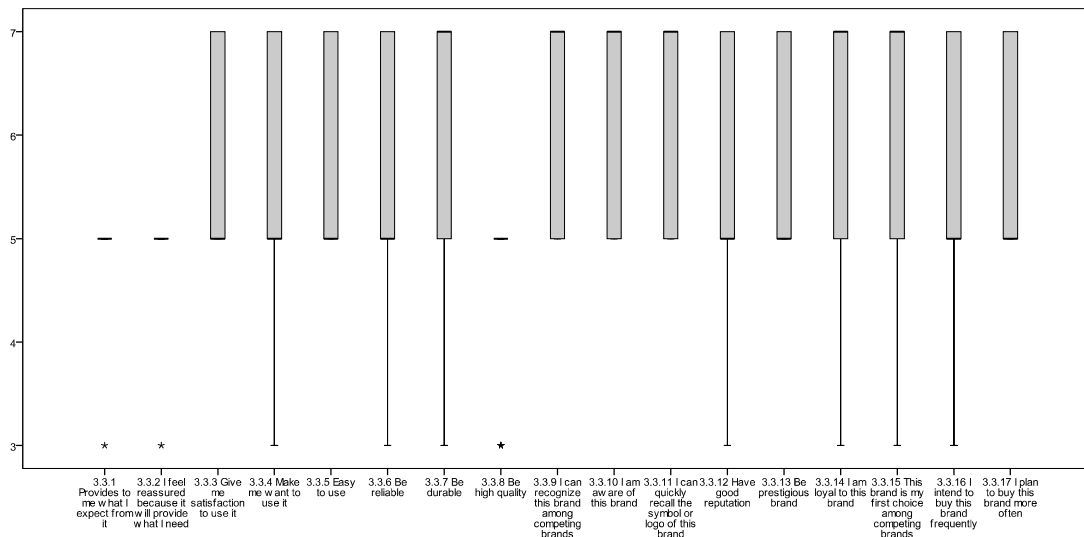


Illustration 5.2.8 – Brand Identity Evaluation: Shuttlelift¹

Shuttlelift had a very homogeneous evaluation (Illustration 5.2.8). As mentioned previously, we could highlight Brand Awareness (Recognition – 6,1; Awareness – 6,1 and Recollection – 6,1) items with a strong Brand Identity level. Four outliers were identified for all 17 items.

¹ Questionnaire's Question 3.5; Likert scale: 1 – Strongly Disagree; 7 – Strongly Agree

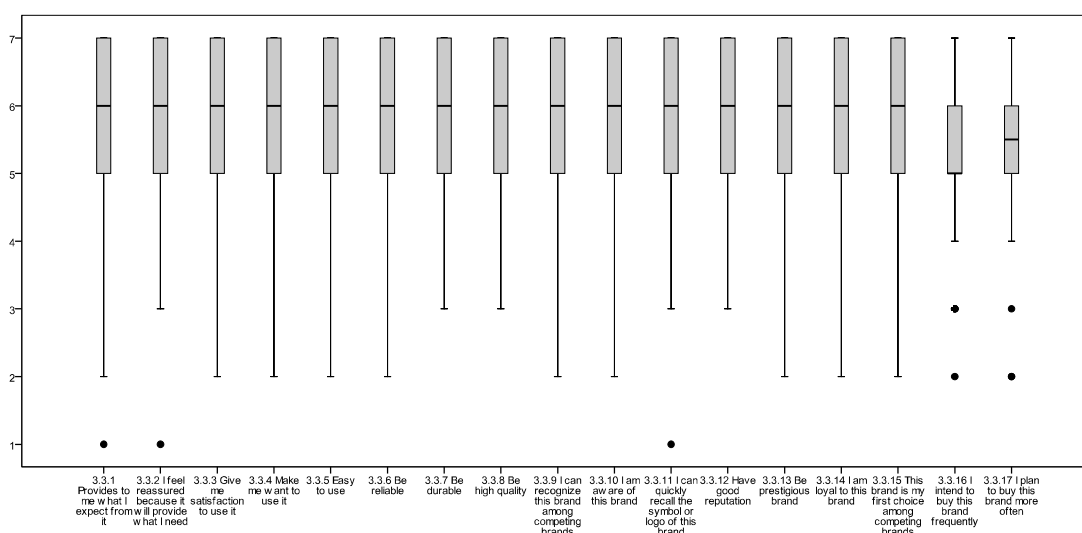


Illustration 5.2.9 – Brand Identity Evaluation: CraneCare¹

Finally, CraneCare also had a very homogeneous score (Illustration 5.2.9). The only 2 items worthy of note were the ones concerning Purchase Intention (Purchase Intention – 5,3 and Plan to Purchase – 5,4) with poorer results. 5 outliers were identified for all 17 items.

5.3 Customer Satisfaction and Trust Analysis

5.3.1 Satisfaction & Trust

Concerning Satisfaction-related scale items (indicated in Table 4.3.6), the results for the Kaiser-Meyer-Olkin's factor and Bartlett's Test of Sphericity are indicated on Table 5.3.2.

With a KMO value of 0,907, there is a high level of sampling adequacy for factor reduction. By applying the Extraction Method of Principal Components and by setting the eigenvalues greater than 1, we obtain 3 new factors that explain 75,317% of the variance of the whole sample.

¹ Questionnaire's Question 3.6; Likert scale: 1 – Strongly Disagree; 7 – Strongly Agree

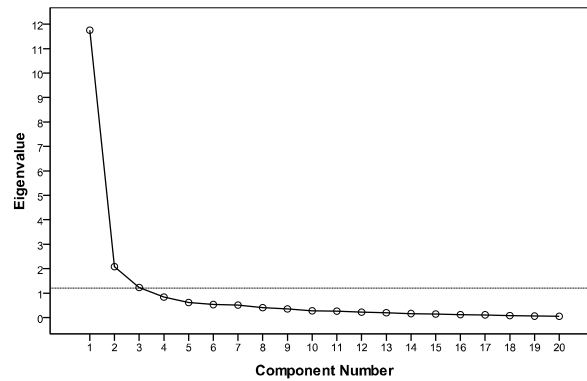


Illustration 5.3.1 – Scree Plot of Eigenvalue versus Satisfaction Component Number

Hence, we will consider 3 new reduced factors or variables for the Satisfaction analysis. The new Rotated Component Matrix is according to Table 5.3.1 hereafter. The highest component scores indicate the correspondence between original and new items. The 3 new variables were added to the SPSS file.

Item	Component			New component's designation		
	1	2	3	S1: "General satisfaction"	S2: "Satisfaction with the way of doing business"	S3:"Satisfaction with pricing, discount and lead time"
2.1	0,700	0,543	0,111	X		
2.2	0,516	0,663	0,142		X	
2.3	0,781	0,416	0,181	X		
2.4	0,169	0,523	0,565			X
2.5	0,115	0,141	0,930			X
2.6	0,076	0,103	0,920			X
2.7	0,819	0,370	0,000	X		
2.8	0,851	0,318	-0,025	X		
2.9	0,807	0,300	0,144	X		
2.10	0,720	0,374	0,228	X		
2.11	0,720	0,078	0,334	X		
2.12	0,514	0,710	0,171		X	
2.13	0,293	0,853	0,157		X	
2.14	0,645	0,529	0,151	X		
2.15	0,256	0,824	0,171		X	
2.16	0,711	0,266	0,287	X		
2.17	0,810	0,372	0,016	X		
2.18	0,769	0,109	-0,010	X		
2.19	0,775	0,255	0,310	X		
2.4.2	0,679	0,442	-0,025	X		

Table 5.3.1 – Satisfaction related items

Now, verifying scale reliability, we obtain the following Cronbach's alpha for the 3 new variables (Table 5.3.2). These values reveal a very good level of scale reliability. Components Plot in Rotated Space is represented in Illustration 5.3.2 hereafter.

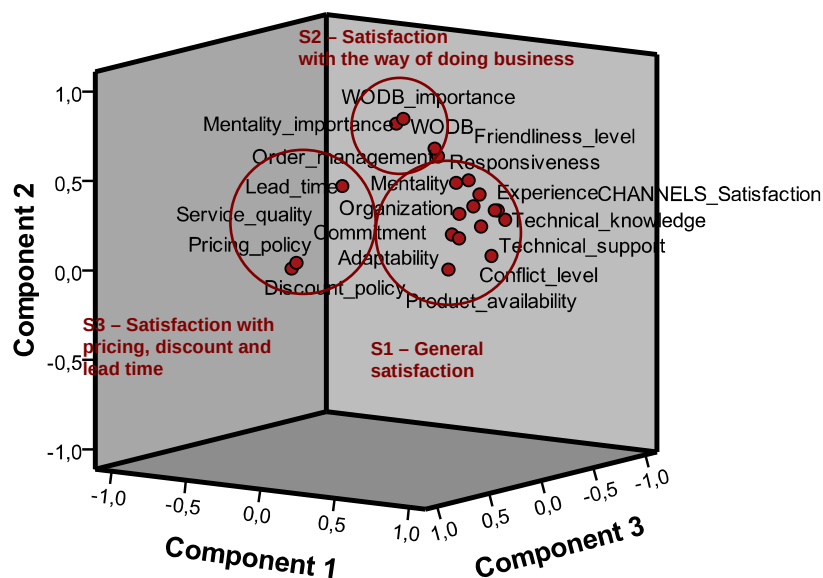


Illustration 5.3.2 – Satisfaction components plot in rotated space

Concerning Trust, during a first phase we considered all 3 items related to this variable (2.4.1, 2.4.3 and 2.4.4) indicated on Table 4.3.6. Applying the Factor Analysis, we obtain one single reduced factor which explains 62,64% of the total sample variance for a KMO value of 0,557. However, while checking the reliability statistics, for these 3 Trust items, we obtain a negative Cronbach's alpha due to a negative average covariance among items. Therefore, we exclude, for the next statistical analysis phase, the Trust item 2.4.3 “I would be willing to change my Manitowoc’s distribution channels” and maintain only item 2.4.1 “I trust in my Manitowoc’s distribution channels” and item 2.4.4 “I would be willing to promote Manitowoc’s crane products and service to a third party”. Considering these 2 Trust items only, the results for the Kaiser-Meyer-Olkin’s factor and Bartlett’s Test of Sphericity are indicated as follows (Table 5.3.2). Although presenting a limit KMO value of 0,5, the level of sample adequacy is still acceptable. The new reduced factor explains

77,418% of the sample variance. These 2 Trust related items present a lower Cronbach's alpha, but still acceptable (Table 5.3.2).

Dimension	KMO and Bartlett's Test				Reliability Statistics	
	KMO Measure	Approx. Chi-Square	df	Sig.	Cronbach's alpha	Number of Items
S1 – General satisfaction	0,907	1596,699	190	0,000	0,961	13
S2 – Satisfaction with the way of doing business					0,903	4
S3 – Satisfaction with pricing, discount and lead time					0,844	3
T – Trust	0,500	38,092	1	0,000	0,703	2

Table 5.3.2 – Sampling Adequacy Test and Cronbach's Alpha for Satisfaction and Trust variables

5.3.2 Customer Satisfaction and Trust versus Channel Type

In order to proceed with our ANOVA test, we need to establish our “null” (H_0) or alternative (H_A) hypotheses, in a way that might support or reject our Research Hypotheses. Regarding Customer Satisfaction and Trust versus Channel Type, we can establish the following:

Research Hyp.	Description	Null Hyp.	Description	Alternative Hyp.	Description
H1a	Customer Satisfaction and Trust is independent from the distribution channel type.	H1a ₀	In the population, all distribution channel types generate equal mean of Customer Satisfaction and Trust	H1a _A	In the population, there is some inequality of mean of Customer Satisfaction and Trust between channel types

Table 5.3.3 – Research, Null and Alternative Hypotheses – Customer Satisfaction and Trust vs. Channel Type

As we can conclude from Table 5.3.3, by validating the Null Hypothesis, we will be supporting the Research Hypotheses and be able to draw our managerial conclusions. Therefore, we will present hereafter the various ANOVA test results.

Item	Levene Statistic	df1	df2	Sig.
S1 – General satisfaction	4,186	2	76	0,019
S2 – Satisfaction with the way of doing business	1,725	2	76	0,185
S3 – Satisfaction with pricing, discount and lead time	2,048	2	76	0,136
T – Trust	2,172	3	105	0,096

Table 5.3.4 – ANOVA Test results – Customer Satisfaction and Trust vs. Channel Type

Concerning **General Satisfaction**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 4,186, Sig. = 0,019). By checking the Robust Tests of Equality of Means, we obtain for the Welch statistic a significance level of 0,025 which is also statistically significant. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Customer Satisfaction and Trust between channel types”, with regard to General Satisfaction. Unfortunately, Post Hoc tests are not possible for General Satisfaction because the group “Sales Representative” has fewer than two cases. In any case, it is clear to see that the difference of General Satisfaction between Manitowoc Direct Sales Force (MDSF) and Dealer is not significant, however, the difference between MDSF or Dealer alone and the combination of these two is significant. Therefore, a MDSF or a Dealer used alone generates a higher mean of General Satisfaction than the combination of the two (Illustration 5.3.3).

Concerning **Satisfaction with the way of doing business**, the test of Homogeneity of variances indicates a significance level higher than 0,05, so we fail to reject the H_0 (Levene = 1,725, Sig. = 0,185). By checking the ANOVA table, we obtain for the F statistic a value of 0,016 with a significance level of 0,985. Again, we fail to reject the H_0 and retain the hypothesis, “In the population, all distribution channel types generate an equal mean of Customer Satisfaction and Trust”, regarding Satisfaction with the way of doing business. As depicted in Illustration 5.3.3, although a MDSF generates a slightly higher mean, the difference is not statistically significant.

Concerning **Satisfaction with pricing, discount and lead time**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 2,048, Sig. = 0,136). By checking the ANOVA table, we obtain a value of 4,645 for the F statistic with a significance level of 0,012. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Customer Satisfaction and Trust between channel types”, regarding Satisfaction with pricing, discount and lead time. Unfortunately, Post Hoc tests are not possible because the group “Sales Representative” has fewer than two cases. In Illustration 5.3.3, it is

nevertheless clear to see that, although the means between the use of a Manitowoc Direct Sales Force and its combination with a Dealer are not significantly different, the mean of Satisfaction with discount, pricing and lead time is significantly lower when a Dealer alone is used.

Concerning **Trust**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 2,172, Sig. = 0,096). By checking the ANOVA table, we obtain for the F statistic a value of 1,180 with a significance level of 0,321. Again, we fail to reject the H_0 and retain the hypothesis, “In the population, all distribution channel types generate equal mean of Customer Satisfaction and trust”, with regard to Trust. As depicted in Illustration 5.3.3, although Manitowoc Direct Sales Force or Dealers or Sales Representatives used alone generate higher means, the difference is not statistically significant. However, if we make an Independent-Samples T Test between MDSF and Dealer, we obtain a statistically significant mean difference between these two groups ($F = 6,589$, Sig. = 0,012). A similar test between Dealer only and MDSF + Dealer is also statistically different ($t = 2,001$; Sig. = 0,05). Knowing this, we can state that, for certain variable group pairs, there is some inequality of mean of Customer Satisfaction and Trust between channel types, with regard to Trust, and it is statistically significant.

To conclude, we could say that Research Hypothesis H1a is rejected in terms of General Satisfaction, Satisfaction with pricing, discount and lead time; and partially regarding of Trust. Research Hypothesis H1a is only retained with regard to Satisfaction on the way of doing business. Therefore, we can conclude that “Customer Satisfaction and Trust is dependent on the distribution channel type”.

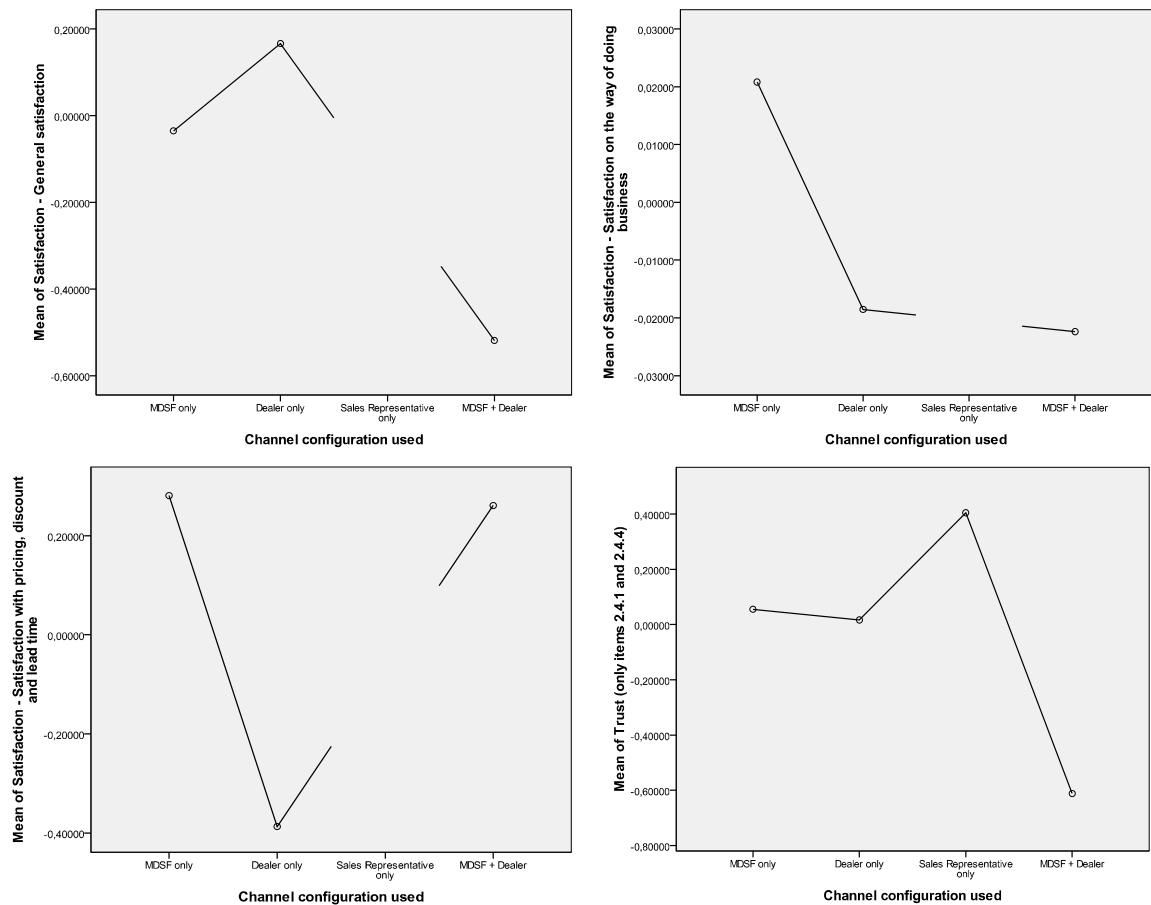


Illustration 5.3.3 – Means Plot – Customer Satisfaction and Trust items vs. Channel Type

5.3.3 Customer Satisfaction and Trust versus Brand

Concerning Customer Satisfaction and Trust versus Brand, we can establish the following:

Research Hyp.	Description	Null Hyp.	Description	Alternative Hyp.	Description
H1b	Customer Satisfaction and Trust is independent from the brand.	H1b ₀	In the population, all brands generate equal mean of Customer Satisfaction and Trust	H1b _A	In the population, there is some inequality of mean of Customer Satisfaction and Trust between brands

Table 5.3.5 – Research, Null and Alternative Hypotheses – Customer Satisfaction and Trust vs. Brand

The ANOVA test results are:

Item	Levene Statistic	df1	df2	Sig.
S1 – General satisfaction	2,175	3	75	0,098
S2 – Satisfaction on the way of doing business	1,125	3	75	0,344
S3 – Satisfaction with pricing, discount and lead time	3,721	3	75	0,015
T – Trust	1,458	3	105	0,230

Table 5.3.6 – ANOVA Test results – Customer Satisfaction and Trust vs. Brand

With reference to **General Satisfaction**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 2,175, Sig. = 0,098). By checking the ANOVA table, we obtain for the F statistic a value of 0,267 with a significance level of 0,849. Again, we fail to reject the H_0 and retain the hypothesis, “In the population, all brands generate an equal mean of Customer Satisfaction and Trust”, pertaining to Satisfaction with the way of doing business. As depicted in Illustration 5.3.4, although Manitowoc and Grove generate higher means than Potain and Shuttlelift, the difference is not statistically significant.

Concerning **Satisfaction with the way of doing business**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 1,125, Sig. = 0,344). By checking the ANOVA table, we obtain a value of 3,624 for the F statistic with a significance level of 0,017. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Customer Satisfaction and Trust between brands”, relating to Satisfaction with the way of doing business. Post Hoc tests (Scheffe) reveal a statistical significant mean difference between Potain and Shuttlelift (Illustration 5.3.4). Although Potain also generates higher means than Manitowoc or Grove, the difference is not statistically significant.

Regarding **Satisfaction with pricing, discount and lead time**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 3,721, Sig. = 0,015). By checking the Robust Tests of Equality of Means, we obtain for the Welch statistic a significance level lower than 0,001 which is also statistically significant. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Customer Satisfaction and Trust between

brands”, in terms of Satisfaction with pricing, discount and lead time. Post Hoc tests (Scheffe) reveal a statistically significant mean difference between Manitowoc, Potain and Grove (Illustration 5.3.4). Although Potain also generates higher means than Shuttlelift, the difference is not statistically significant.

Concerning **Trust**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 1,458, Sig. = 0,230). By checking the ANOVA table, we obtain for the F statistic a value of 1,550 with a significance level of 0,206. Again, we fail to reject the H_0 and retain the hypothesis, “In the population, all brands generate an equal mean of Customer Satisfaction and trust”, in terms of Trust. As depicted in Illustration 5.3.4, although Shuttlelift and Potain generate higher means than Manitowoc and Grove, the difference is not statistically significant.

To conclude, we could say that Research Hypothesis H1b is rejected with regard to Satisfaction with the way of doing business and Satisfaction with pricing, discount and lead time. Research Hypothesis H1b is however retained regarding General satisfaction and Trust. Therefore, we can conclude that “Customer Satisfaction and trust is partially dependent on the Brand”.

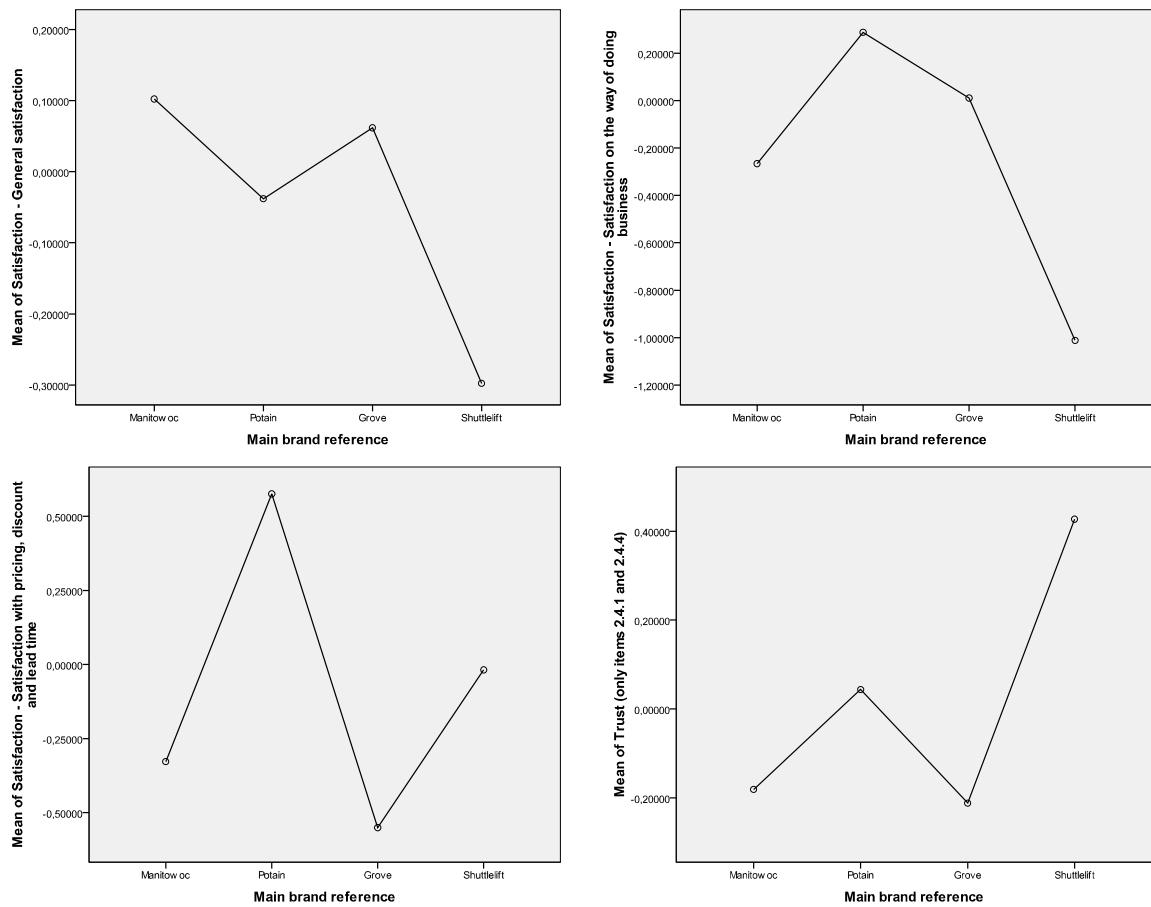


Illustration 5.3.4 – Means Plot – Customer Satisfaction and Trust items vs. Brands

5.3.4 Customer Satisfaction and Trust versus Sales Area

In terms of Customer Satisfaction and Trust versus Sales Area, we can establish the following:

Research Hyp.	Description	Null Hyp.	Description	Alternative Hyp.	Description
H1c	Customer Satisfaction and Trust is independent from the geographical area.	H1c ₀	In the population, all Sales Areas generate equal mean of Customer Satisfaction and Trust	H1c _A	In the population, there is some inequality of mean of Customer Satisfaction and Trust between Sales Areas

Table 5.3.7 – Research, Null and Alternative Hypotheses – Customer Satisfaction and Trust vs. Sales Areas

Since at least one group has the sum of case weights less than or equal to 1, we will read the test result directly from the ANOVA table:

Item	Sum of Squares	Df	Mean Square	F	Sig.
S1 – General satisfaction	12,781	5	2,556	2,861	0,021
S2 – Satisfaction on the way of doing business	8,407	5	1,681	1,764	0,131
S3 – Satisfaction with pricing, discount and lead time	17,993	5	3,599	4,378	0,002
T – Trust	20,392	5	4,078	4,795	0,001

Table 5.3.8 – ANOVA Test results – Customer Satisfaction and Trust vs. Sales Area

Concerning **General Satisfaction**, the ANOVA Test is statistically significant and allow us to reject the H_0 ($F = 2,861$, $\text{Sig.} = 0,021$). Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Customer Satisfaction and Trust between Sales Areas”, with reference to General Satisfaction. Unfortunately, Post Hoc tests are not possible for General Satisfaction because some groups have fewer than two cases. In Illustration 5.3.5, we can see that the highest mean of satisfaction is generated by France & DomTom and the lowest by Central Europe. Intermediate values are obtained for Iberica, South Europe and Asia & Pacific. Also intermediate but lower is the mean generated by North Europe & the UK.

Regarding **Satisfaction with the way of doing business**, the ANOVA test indicates for the F statistic a value of 1,764 with a significance level of 0,131. Therefore, we fail to reject the H_0 and retain the hypothesis, “In the population, all Sales Areas generate an equal mean of Customer Satisfaction and Trust”, regarding Satisfaction with the way of doing business. As depicted on Illustration 5.3.5, although France & DomTom and South Europe generate higher means than Iberica, North Europe & the UK and Asia & Pacific, the difference is not statistically significant.

Pertaining to **Satisfaction with pricing, discount and lead time**, the ANOVA Test is statistically significant and allow us to reject the H_0 ($F = 4,378$, $\text{Sig.} = 0,002$). Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Customer Satisfaction and Trust between Sales Areas”, with

regard to Satisfaction with pricing, discount and lead time. Unfortunately, Post Hoc tests are not possible because some groups have fewer than two cases. In Illustration 5.3.5, we can see that the highest mean of satisfaction is generated by France & DomTom and Iberica. The lowest mean values are obtained for Central Europe and Asia & Pacific. Intermediate values are obtained for North Europe & the UK and South Europe.

Concerning **Trust**, the ANOVA Test is statistically significant and allow us to reject the H_0 ($F = 4,795$, $Sig. = 0,001$). Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Customer Satisfaction and Trust between Sales Areas”, relating to Trust. Post Hoc tests (Tukey HSD) indicate a statistically significant mean difference between Central Europe and Asia & Pacific, between North Europe & the UK and Asia & Pacific and between South Europe and Asia & Pacific. In Illustration 5.3.5, we can see that the highest mean of Trust is generated by France & DomTom and Asia & Pacific. The lowest mean values are obtained for Central Europe, North Europe & the UK and South Europe. Intermediate values are obtained for Iberica.

To conclude, we could say that Research Hypothesis H1c is rejected with regard to General Satisfaction, Satisfaction with pricing, discount and lead time and Trust. Research Hypothesis H1c is only retained regarding Satisfaction with the way of doing business. Therefore, we can conclude that “Customer Satisfaction and trust is dependent on Sales Area”.

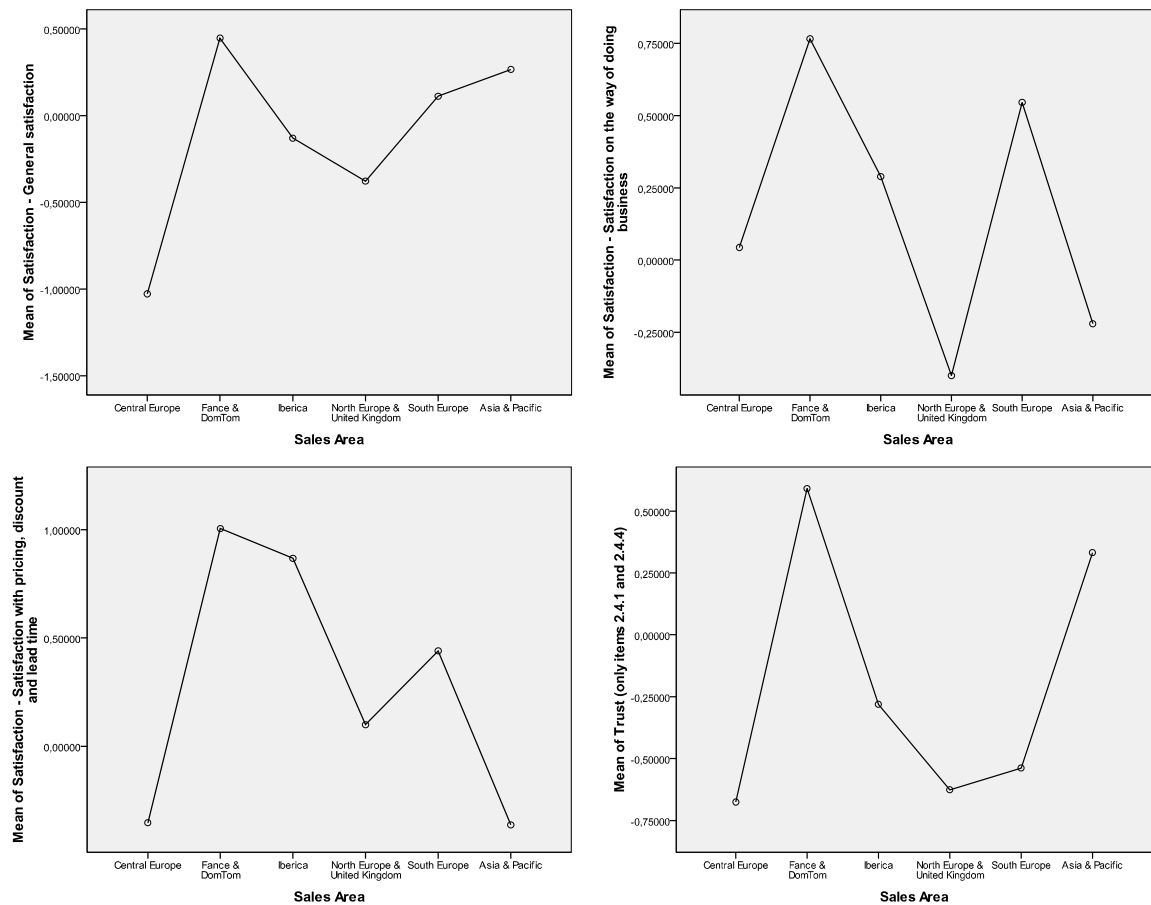


Illustration 5.3.5 – Means Plot – Customer Satisfaction and Trust items vs. Sales Areas

5.4 Brand Identity Analysis

5.4.1 Brand Identity dimensions and sub-dimensions

Concerning Brand Identity related scale items (indicated on Table 4.3.7), the results for the Kaiser-Meyer-Olkin's factor and Bartlett's Test of Sphericity are indicated on Table 5.4.1. All KMO values obtained are within the limits of the acceptable and, therefore, there is a good level of sampling adequacy for factor reduction. By applying the Extraction Method of Principal Components and by setting the eigenvalues greater than 1, we obtain only one factor per dimension. The total variance of the whole sample is indicated on Table 5.4.2.

The 6 new variables were added to the SPSS file. It is important to note that the CraneCare brand was excluded from this analysis because it is not a primary equipment brand.

Dimension	Sub-dimension	KMO and Bartlett's Test				Reliability Statistics	
		KMO	Approx. Chi-Square	df	Sig.	Cronbach's alpha	Number of Items
Brand Specific Association	Emotional Value	0,832	475,228	10	0,000	0,925	5
	Perceived quality	0,715	270,041	3	0,000	0,914	3
General Brand Impression	Brand awareness	0,695	224,284	3	0,000	0,887	3
	Brand image	0,500	70,351	1	0,000	0,815	2
Brand Commitment	Brand loyalty	0,500	195,957	1	0,000	0,959	2
	Purchase intention	0,500	132,082	1	0,000	0,927	2

Table 5.4.1 – Sampling adequacy test and Cronbach's alpha for Brand Identity variables

Dimension	Sub-dimension	Total Variance Explained
Brand Specific Association	Emotional Value	77,334
	Perceived quality	85,743
General Brand Impression	Brand awareness	81,851
	Brand image	84,424
Brand Commitment	Brand loyalty	96,082
	Purchase intention	93,383

Table 5.4.2 – Total variance explained for Brand Identity items

5.4.2 Brand Identity versus Channel Type

In order to proceed with our ANOVA test, we need to establish our “null” (H_0) or alternative (H_A) hypotheses, in a way that might support or reject our Research Hypotheses. With regard to Brand Identity versus channel type, we can establish the following:

Research Hyp.	Description	Null Hyp.	Description	Alternative Hyp.	Description
H2a	Distribution channel type has a main effect on Brand Identity.	H2a ₀	In the population, all distribution channel types generate equal mean of Brand Identity	H2a _A	In the population, there is some inequality of mean of Brand Identity between distribution channel types

Table 5.4.3 – Research, Null and Alternative Hypotheses – Brand Identity vs. Channel Type

As we can conclude from Table 5.4.3, by rejecting the Null Hypothesis, we will be supporting the Research Hypotheses and be able to draw our managerial conclusions. Therefore, we will present hereafter the various ANOVA test results.

Dimension	Sub-dimension	Levene Statistic	df1	df2	Sig.
Brand Specific Association	Emotional Value	1,563	3	107	0,203
	Perceived quality	4,153	3	108	0,008
General Brand Impression	Brand awareness	2,722	3	110	0,048
	Brand image	5,604	3	108	0,001
Brand Commitment	Brand loyalty	2,472	3	102	0,066
	Purchase intention	2,633	3	93	0,055

Table 5.4.4 – ANOVA Test results – Brand Identity vs. Channel Type

Concerning **Emotional Value**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 1,563, Sig. = 0,203). By checking the ANOVA table, we obtain for the F statistic a value of 0,260 with a significance level of 0,854. Again, we fail to reject the H_0 and retain the hypothesis, “In the population, all distribution channel types generate equal mean of Brand Identity”, regarding Emotional Value. As depicted in Illustration 5.4.1, although MDSF and Dealer alone generate higher means than Sales Representative and the combination of MDSF and Dealer, the difference is not statistically significant.

Regarding **Perceived Quality**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 4,153, Sig. = 0,008). By checking the Robust Tests of Equality of Means, we obtain for the Welch statistic a significance level of 0,393 which is not statistically significant. Again, we fail to reject the H_0 and retain the hypothesis, “In the population, all distribution channel types generate equal mean of Brand Identity”, in terms of Perceived Quality. As depicted in Illustration 5.4.1, although MDSF and Dealer alone generate higher means than Sales Representative and the combination of MDSF and Dealer, the difference is not statistically significant.

Concerning **Brand Awareness**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 2,722, Sig. = 0,048). By checking the Robust Tests of Equality of Means, we obtain for the Welch statistic a significance level of

0,432 which is not statistically significant. Again, we fail to reject the H_0 and retain the hypothesis, “In the population, all distribution channel types generate equal mean of Brand Identity”, with regard to Brand Awareness. As depicted in Illustration 5.4.1, although MDSF and Dealer alone generate higher means than Sales Representative and the combination of MDSF and Dealer, the difference is not statistically significant.

In relation to **Brand Image**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 5,604, Sig. = 0,001). By checking the Robust Tests of Equality of Means, we obtain for the Welch statistic a significance level of 0,281 which is not statistically significant. Again, we fail to reject the H_0 and retain the hypothesis, “In the population, all distribution channel types generate an equal mean of Brand Identity”, with regard to Brand Image. As depicted in Illustration 5.4.1, although MDSF alone generate higher means than Dealers, Sales Representative and the combination of MDSF and Dealer, the difference is not statistically significant.

Concerning **Brand Loyalty**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 2,472, Sig. = 0,066). By checking the ANOVA table, we obtain for the F statistic a value of 7,181 with a significance level lower than 0,001. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Brand Identity”, with regard to Brand Loyalty. Post Hoc tests (Scheffe) indicate a statistically significant mean difference between MDSF alone and Sales Representatives and MDSF combined with Dealer. As depicted in Illustration 5.4.1, MDSF alone generates the highest mean of Brand Loyalty.

Concerning **Purchase Intention**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 2,633, Sig. = 0,055). By checking the ANOVA table, we obtain for the F statistic a value of 4,073 with a significance level of 0,009. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Brand Identity”, with regard to Purchase Intention. Post Hoc tests (Scheffe) indicate a statistically significant

mean difference between MDSF alone and Sales Representatives alone. As depicted in Illustration 5.4.1, MDSF alone and Sales Representative alone generate the highest mean of Purchase Intention.

To conclude, we could say that Research Hypothesis H2a is supported with regard to Brand Loyalty and Purchase Intention. Research Hypothesis H2a is not supported in terms of Emotional Value, Perceived Quality, Brand Awareness and Brand Image. Nevertheless, we can still assume that “Distribution Channel Type has a partial effect on Brand Identity”.

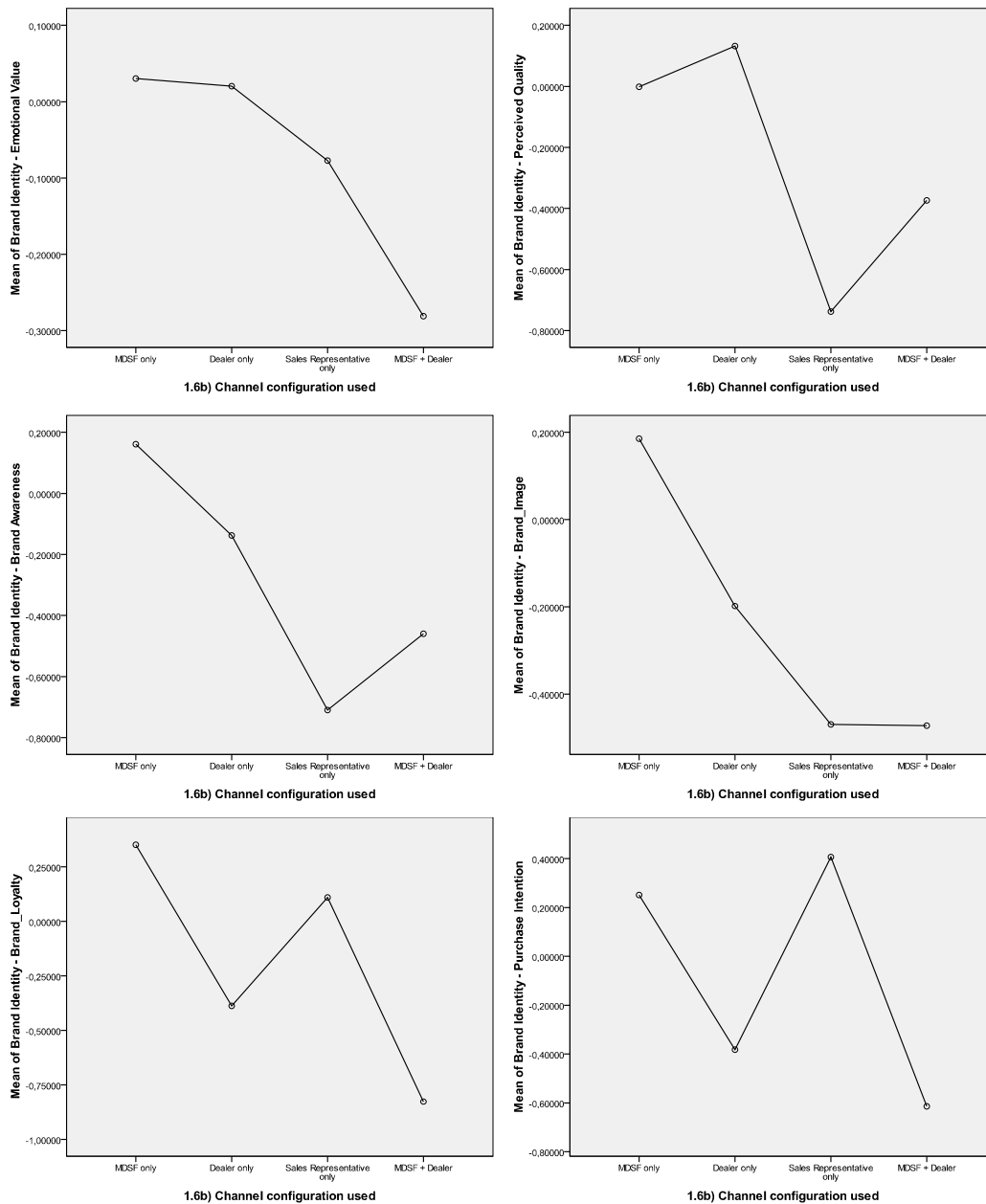


Illustration 5.4.1 – Means Plot – Brand Identity items vs. Channel Type

5.4.3 Brand Identity versus Brand

In order to proceed with our ANOVA test, we need to establish our “null” (H_0) or alternative (H_A) hypotheses, in a way that might support or reject our Research Hypotheses. With regard to Brand Identity versus Brand, we can establish the following:

Research Hyp.	Description	Null Hyp.	Description	Alternative Hyp.	Description
H2b	Brand has a main effect on Brand Identity.	H2b ₀	In the population, all brands generate equal mean of Brand Identity	H2b _A	In the population, there is some inequality of mean of Brand Identity between brands

Table 5.4.5 – Research, Null and Alternative Hypotheses – Brand Identity vs. Brand

As we can conclude from Table 5.4.5, by rejecting the Null Hypothesis, we will be supporting the Research Hypotheses and be able to draw our managerial conclusions. Therefore, we will present hereafter the various ANOVA test results.

Dimension	Sub-dimension	Levene Statistic	df1	df2	Sig.
Brand Specific Association	Emotional Value	0,981	3	107	0,405
	Perceived quality	1,914	3	108	0,132
General Brand Impression	Brand awareness	4,533	3	110	0,005
	Brand image	3,439	3	108	0,019
Brand Commitment	Brand loyalty	7,096	3	102	0,000
	Purchase intention	1,049	3	93	0,375

Table 5.3.6 – ANOVA Test results – Brand Identity vs. Brand

Concerning **Emotional Value**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 0,981, Sig. = 0,405). By checking the ANOVA table, we obtain for the F statistic a value of 2,179 with a significance level of 0,095. Again, we fail to reject the H_0 and retain the hypothesis, “In the population, all brands generate equal mean of Brand Identity”, regarding Emotional Value. As depicted in Illustration 5.4.2, although Potain generate higher means than Manitowoc, Grove and Shuttlelift, the difference is not statistically significant.

With regard to **Perceived Quality**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 1,914, Sig. = 0,132). By checking the ANOVA table, we obtain for the F statistic a value of 3,734 with a significance level of 0,013 which is statistically significant. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Brand Identity”, in relation to Perceived Quality. Post Hoc tests (Scheffe) indicate a statistically significant mean difference between Potain and Grove brands. As depicted in Illustration 5.4.2, Potain generates the highest mean of Perceived Quality.

Concerning **Brand Awareness**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 4,533, Sig. = 0,005). By checking the Robust Tests of Equality of Means, we obtain for the Welch statistic a significance level of 0,016 which is statistically significant. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Brand Identity”, in relation to Brand Awareness. Post Hoc tests (Scheffe) indicate a statistically significant mean difference between Potain and Grove brands. As depicted in Illustration 5.4.2, Potain and Shuttlelift generate the highest means of Brand Awareness.

Concerning **Brand Image**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 3,439, Sig. = 0,019). By checking the Robust Tests of Equality of Means, we obtain for the Welch statistic a significance level lower than 0,001 which is statistically significant. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Brand Identity”, in relation to Brand Image. Post Hoc tests (Scheffe) indicate a statistically significant mean difference between Manitowoc, Potain and Grove brands. As depicted in Illustration 5.4.2, Potain generate the highest mean of Brand Image.

Concerning **Brand Loyalty**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 7,096, Sig. = 0,000). By checking the Robust Tests of Equality of Means, we obtain for the Welch statistic a significance level lower than 0,001 which is statistically significant. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Brand Identity”, in terms of Brand Loyalty. Post Hoc tests (Scheffe) indicate a statistically significant mean difference between Manitowoc, Potain, Grove and Shuttlelift brands. As depicted in Illustration 5.4.2, Potain and Shuttlelift generate the highest means of Brand Loyalty.

Regarding **Purchase Intention**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 1,049, Sig. = 0,375). By checking the ANOVA table, we obtain for the F statistic a value of 10,101 with

a significance level lower than 0,001 which is statistically significant. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Brand Identity”, pertaining to Purchase Intention. Post Hoc tests (Scheffe) indicate a statistically significant mean difference between Potain, Grove and Shuttlelift brands. As depicted in Illustration 5.4.2, Potain and Shuttlelift generate the highest means of Purchase Intention.

To conclude, we could say that Research Hypothesis H2b is supported in relation to Perceived Quality, Brand Awareness, Brand Image, Brand Loyalty and Purchase Intention. Research Hypothesis H2b is not supported with regard to Emotional Value. Therefore, we conclude that “Brand has a main effect on Brand Identity”.

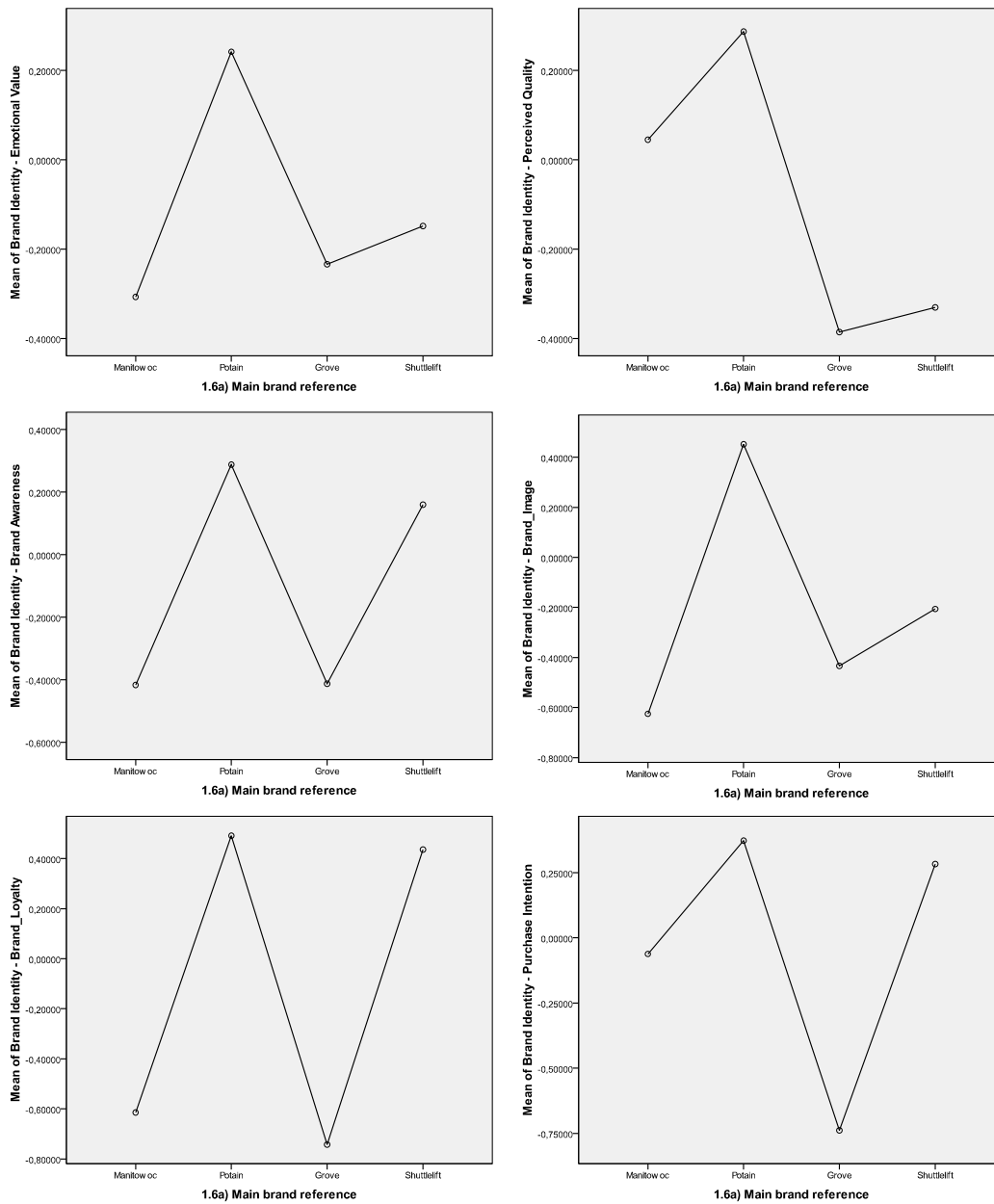


Illustration 5.4.2 – Means Plot – Brand Identity items vs. Brand

5.4.4 Brand Identity versus Sales Area

In order to proceed with our ANOVA test, we need to establish our “null” (H_0) or alternative (H_A) hypotheses, in a way that might support or reject our Research Hypotheses. With regard to Brand Identity versus Sales Area, we can establish the following:

Research Hyp.	Description	Null Hyp.	Description	Alternative Hyp.	Description
H2c	Sales Area has a main effect on Brand Identity.	H2c ₀	In the population, all Sales Area generate equal means of Brand Identity	H2c _A	In the population, there is some inequality of means of Brand Identity between Sales Area

Table 5.4.7 – Research, Null and Alternative Hypotheses – Brand Identity vs. Sales Area

As we can conclude from Table 5.4.5, by rejecting the Null Hypothesis, we will be supporting the Research Hypotheses and be able to draw our managerial conclusions. Therefore, we will present hereafter the various ANOVA test results.

Dimension	Sub-dimension	Levene Statistic	df1	df2	Sig.
Brand Specific Association	Emotional Value	6,501	5	105	0,000
	Perceived quality	3,447	5	106	0,006
General Brand Impression	Brand awareness	2,155	5	108	0,064
	Brand image	5,886	5	106	0,000
Brand Commitment	Brand loyalty	6,205	5	100	0,000
	Purchase intention	5,616	5	91	0,000

Table 5.4.8 – ANOVA Test results – Brand Identity vs. Sales Area

Concerning **Emotional Value**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 6,501, Sig. = 0,000). By checking the Robust Tests of Equality of Means, we obtain for the Welch statistic a significance level of 0,013 which is statistically significant. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of means of Brand Identity between Sales Area”, in relation to Emotional Value. Post Hoc tests (Scheffe) indicate a statistically significant mean difference between Central Europe and South Europe. As depicted in Illustration 5.4.3, France & DomTom and South Europe generate the highest means of Emotional Value.

Concerning **Perceived Quality**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 3,447, Sig. = 0,006). By checking the Robust Tests of Equality of Means, we obtain for the Brown-Forsythe statistic a significance level of 0,013 which is statistically significant. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of means of Brand Identity between Sales Area”, regarding Perceived Quality. Post Hoc tests

(Tukey HSD) indicate a statistically significant mean difference between Central Europe and Asia & Pacific. As depicted in Illustration 5.4.3, France & DomTom, Iberica, South Europe and Asia & Pacific generate the highest means of Perceived Quality. Central Europe and North Europe & the UK generate the lowest means.

Concerning **Brand Awareness**, the test of Homogeneity of variances indicates a Significance level higher than 0,05, so we fail to reject the H_0 (Levene = 2,155, Sig. = 0,064). By checking the ANOVA table, we obtain for the F statistic a value of 1,100 with a significance level of 0,365. Again, we fail to reject the H_0 and retain the hypothesis, “In the population, all Sales Areas generate equal means of Brand Identity”, in terms of Brand Awareness. As depicted in Illustration 5.4.2, although France & DomTom and South Europe generate higher means than all other areas, the difference is not statistically significant.

Concerning **Brand Image**, Robust tests of equality of means cannot be performed because at least one group has zero variance. Therefore, by reading the ANOVA table we obtain for the F statistic a value of 2,132 with a significance level of 0,067. Therefore, we fail to reject the H_0 and retain the hypothesis, “In the population, all Sales Area generate equal means of Brand Identity”, with regard to Brand Image. As depicted in Illustration 5.4.3, although France & DomTom and South Europe generate higher means than all other areas, the difference is not statistically significant.

Concerning **Brand Loyalty**, the test of Homogeneity of variances is statistically significant and allow us to reject the H_0 (Levene = 6,205, Sig. = 0,000). By checking the Robust Tests of Equality of Means, we obtain for the Welch statistic a significance level of 0,065 which is not statistically significant. Therefore, we fail to reject the H_0 and retain the hypothesis, “In the population, all brands generate equal means of Brand Identity”, with regard to Brand Loyalty. As depicted in Illustration 5.4.3, although France & DomTom generates higher mean than all other areas, the difference is not statistically significant.

Concerning **Purchase Intention**, Robust tests of equality of means cannot be performed because at least one group has zero variance. Therefore, by reading the ANOVA table we obtain for the F statistic a value of 0,962 with a significance level of 0,445. Therefore, we fail to reject the H_0 and retain the hypothesis, “In the population, all brands generate equal means of Brand Identity”, in relation to Purchase Intention. As depicted in Illustration 5.4.3, although France & DomTom higher mean than all other areas, the difference is not statistically significant.

To conclude, we could say that Research Hypothesis H2c is supported in terms of Emotional Value and Perceived Quality. Research Hypothesis H2c is not supported with regard to Brand Awareness, Brand Image, Brand Loyalty and Purchase Intention. Therefore, we conclude that “Sales Area has a partial effect on Brand Identity”.

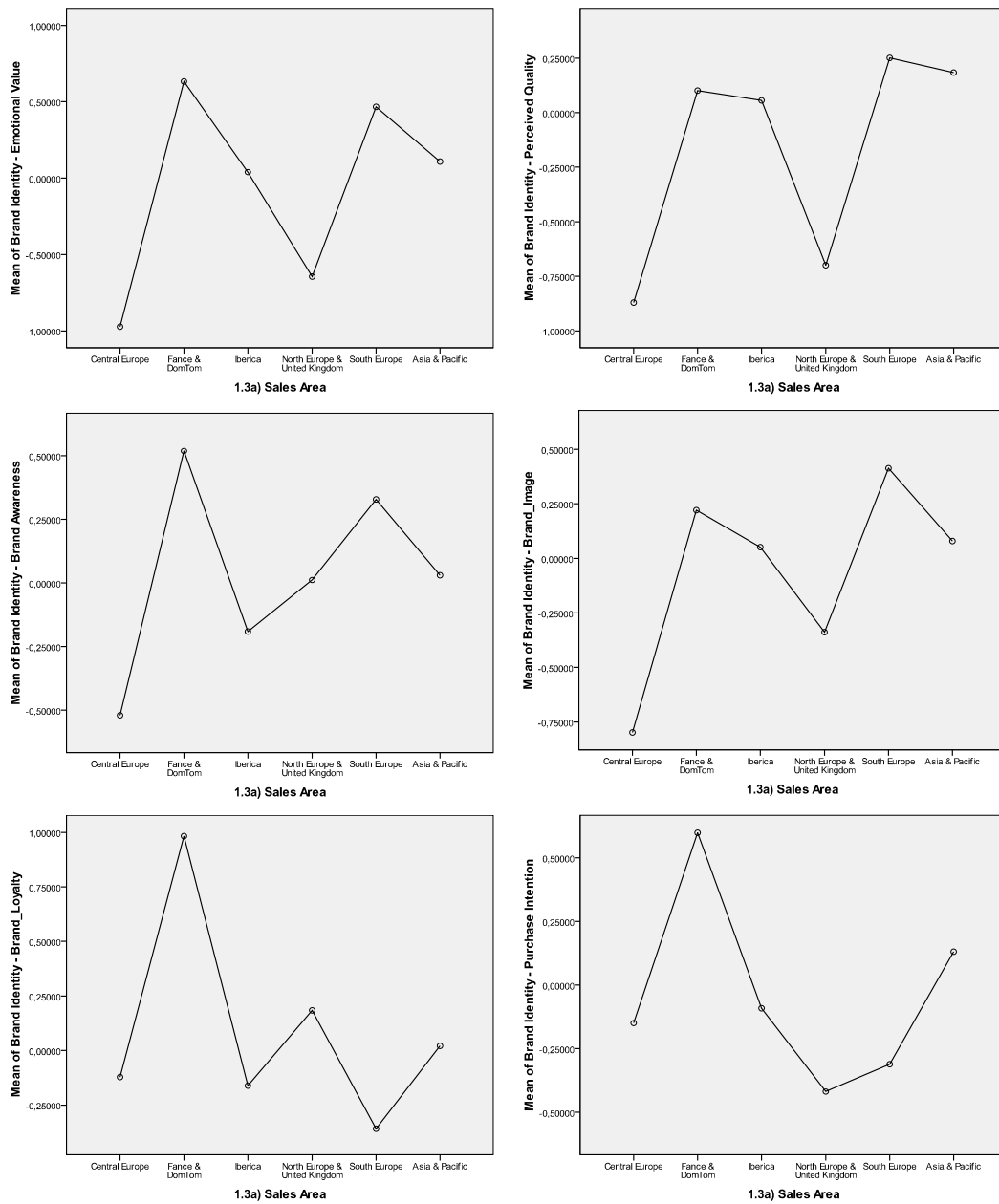


Illustration 5.4.2 – Means Plot – Brand Identity items vs. Sales Area

5.5 Channel Performance Analysis

5.5.1 Profit / Distribution Costs Ratio Calculation

In order to assess Channel Performance Analysis, according to the method cited in Section 4.3.4, we first need to determine Sales value, Cost of Goods Sold and Margin per Sales Area. This information can be extracted from the historical financial archives of Manitowoc and is presented in Table 5.5.1. Note that Benelux and Asia & Pacific areas are not considered in this section because Benelux did not exist up to 2009 and financial data relative to Asia & Pacific was unavailable.

EMEA Sales Area	Sales			Cost of goods sold			Gross margin			%		
	2009	2008	2007	2009	2008	2007	2009	2008	2007	2009	2008	2007
1 Africa	60,4	61,6	47,3	47,5	43,3	32,3	12,9	18,3	15,0	21,4	29,6	31,7
2 Benelux	-	-	-	-	-	-	-	-	-	-	-	-
3 Central Europe	123,8	205,2	190,1	101,6	153,2	140,5	22,2	52,1	49,6	0,2	0,3	0,3
4 Russia & CIS	16,3	77,7	81,5	12,0	53,0	56,6	4,3	24,6	24,9	26,4	31,7	30,6
5 France & DomTom	99,4	253,4	238,5	70,7	167,3	162,5	28,7	86,1	76,0	28,9	34,0	31,9
6 Iberica	30,7	73,5	75,1	23,0	56,2	57,4	7,7	17,2	17,8	25,1	23,5	23,7
7 Middle East	188,8	212,6	124,2	152,3	152,3	89,8	36,5	60,3	34,4	19,3	28,4	27,7
8 North Europe & UK	82,0	192,6	171,6	65,2	140,2	126,1	16,8	52,4	45,5	20,5	27,2	26,5
9 South Europe	75,7	121,9	117,6	59,0	90,0	88,0	16,7	31,8	29,6	22,1	26,1	25,1
Total	676,6	1200,4	1047,7	530,4	856,9	754,4	146,3	343,5	293,3	21,6	28,6	28,0

Table 5.5.1 – Manitowoc sales, cost of goods sold and gross margin in 2009, 2008 and 2007 (in million €)

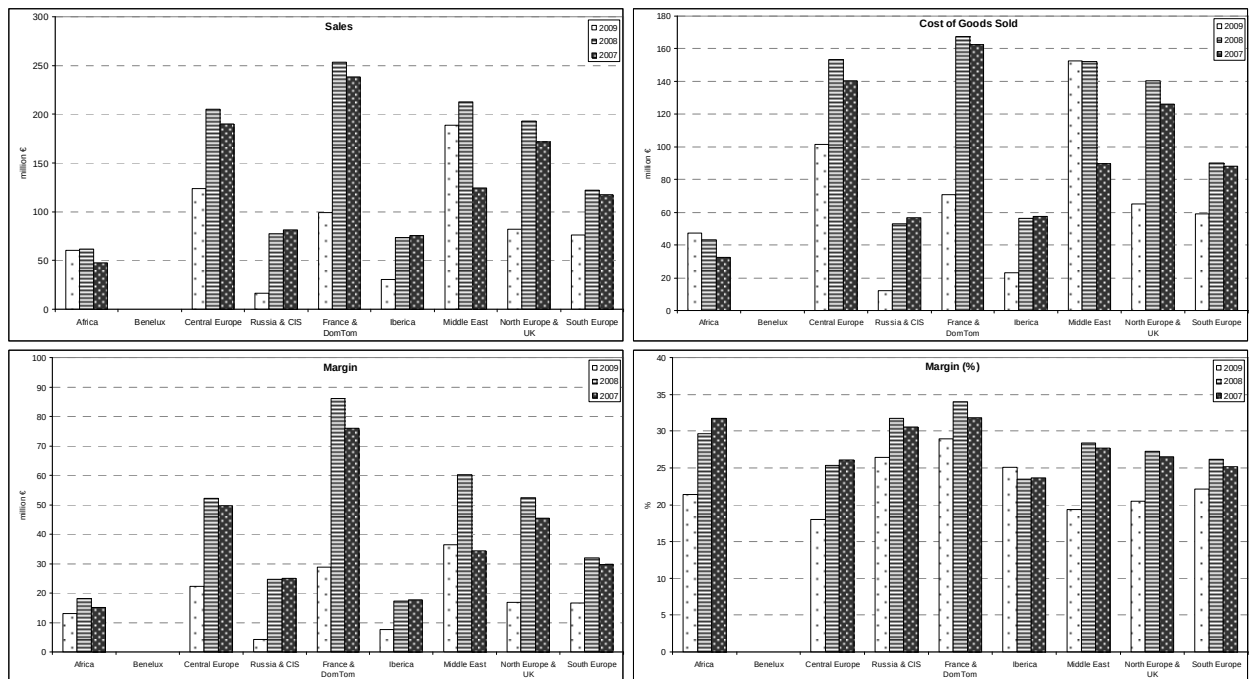


Illustration 5.5.1 – Maniowoc sales, cost of goods sold and margin in 2009, 2008 and 2007

The next step is to identify the value of General Administrative and Selling Expenses (GASE). With Sales, Cost of Goods Sold and GASE (distribution costs) values, we can calculate our Profit or Net Income Before Taxes, per Sales Area. Our final goal is to calculate the Profit / Distribution Costs Ratio so we can evaluate it by varying our independent variables like Distribution Channel Type and Sales Area. Research Hypothesis H3i (i = a, b, c) are to be analyzed and supported or rejected.

$$\text{Profit / Distribution Costs Ratio} = \frac{\text{Sales} - \text{Cost of Goods Sold} - \text{GASE}}{\text{GASE}}$$

Equation 5.5.1 – Turnover / Distribution Costs Ratio

By utilizing Equation 5.5.1, we are able to calculate the data included in Table 5.5.2 hereafter.

Sales Area		Africa			Central Europe			Russia & CIS			France & DonTom			Iberica			Middle East			North Europe & UK			South Europe		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
in million €		2009	2008	2007	2009	2008	2007	2009	2008	2007	2009	2008	2007	2009	2008	2007	2009	2008	2007	2009	2008	2007	2009	2008	2007
Sales		60.4	61.6	47.3	123.8	205.2	190.1	16.3	77.7	81.5	99.4	253.4	238.5	30.7	73.5	75.1	188.8	212.6	124.2	82.0	192.6	171.6	75.7	121.9	117.6
Costs of goods sold		47.5	43.3	32.3	101.6	153.2	140.5	12.0	53.0	56.6	70.7	167.3	162.5	23.0	56.2	57.4	152.3	152.3	89.8	65.2	140.2	126.1	59.0	90.0	88.0
Gross margin		12.9	18.3	15.0	22.2	52.1	49.6	4.3	24.6	24.9	28.7	86.1	76.0	7.7	17.2	17.8	36.5	60.3	34.4	16.8	52.4	45.5	16.7	31.8	29.6
General administrative and selling expenses (GASE)		Central Sales Administration																							
		Used Equipments																							
		General Sales																							
		Branch Sales Expenses																							
		Employee Related Expenses																							
		Building & Equip Expenses																							
		Marketing Expenses																							
		Professional Services																							
		Tax & Penalties																							
		Travel & Entertainment Exp																							
Miscellaneous Expenses		Total																							
		Total																							
Profit		11.1	16.7	13.6	19.0	48.8	46.7	2.7	23.0	23.5	25.8	83.1	73.3	5.9	15.3	16.1	34.7	58.7	33.1	14.6	50.1	43.4	14.9	29.5	27.5
Profit / GASE Ratio		6.1	10.7	10.0	5.9	14.8	16.2	1.7	14.4	16.8	8.7	27.3	27.6	3.2	7.9	9.5	20.2	36.9	23.8	6.6	21.2	21.1	8.0	12.5	13.4

Table 5.5.2 – Profit / Distribution Costs (GASE) Ratio

5.5.2 Channel Performance versus Channel Type

One of the difficulties in the assessment of this variable, Channel Performance versus Channel Configuration, is that the financial data is not structured in a way that allows us to split the sales generated specifically by the MDSF, Dealers or Sales Representatives. Another difficulty is that Manitowoc does not keep any record or database of final customers. CRM does not exist either. All of these factors complicate the implementation of channel performance assessment, as Sharma and Mehrotra (2006) suggested and shown in Tables 2.4.1 to 2.4.3. What we can estimate, however, is the maximum market coverage by the MDSF, by comparing: the number of dealers versus the number of direct Manitowoc salesmen, the effort of each sales team in covering all deals in a direct way in opposition to the dealer's coverage; and the estimated total market size by number of accounts. Therefore, in Table 5.5.3, is indicated the maximum MDSF market coverage, resulting from a Manitowoc expert consultation.

Sales Area	# Salesmen	# Dealers	Maximum MDSF Market Coverage
Africa	4	15	10%
Central Europe	10	87	10%
Russia & CIS	4	7	10%
France & DomTom	18	36	30%
Iberica	6	6	10%
Middle East	5	16	30%
North Europe & the UK	4	18	20%
South Europe	7	63	10%

Table 5.5.4 – Maximum MDSF Market Coverage per Sales Area

All sales areas utilize both types of distribution channels, individually and mixed, to reach final customers, with different levels of market penetration from the MDSF. The Sales Areas considered to attain the maximum market penetration are France & DomTom and the Middle East, with 30%. An intermediate value of 20% is given to North Europe & the UK. All other areas are considered to have a maximum of 10% for MDSF market coverage.

In order to proceed with our ANOVA test, we need to establish our “null” (H_0) or alternative (H_A) hypotheses, in a way that might support or reject our Research Hypotheses. In terms of Channel Performance versus Channel Type, we can establish the following:

Research Hyp.	Description	Null Hyp.	Description	Alternative Hyp.	Description
H3a	Distribution channel type has a main effect on Channel Performance.	$H3a_0$	In the population, all distribution channel types generate equal mean of Profit/GASE Ratio	$H2a_A$	In the population, there is some inequality of mean of Profit/GASE Ratio between distribution channel types

Table 5.5.4 – Research, Null and Alternative Hypotheses – Channel Performance vs. Channel Type

As we can conclude from Table 5.5.4, by rejecting the Null Hypothesis, we will be supporting the Research Hypothesis and be able to draw our managerial conclusions. Therefore, we will present hereafter the various ANOVA test results.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	959,979	7	137,140	2,827	0,040
Within Groups	776,224	16	48,514		
Total	1736,203	23			

Table 5.5.5 – ANOVA Test results – Channel Performance vs. Distribution Channels Configuration

By reading the ANOVA table we obtain for the F statistic a value of 2,827 with a significance level of 0,040. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Profit/GASE Ratio between distribution channel types”. Post Hoc tests (Scheffe) indicate a statistically significant mean difference between areas covered by a maximum of 30% and areas covered by a maximum of 10%. As depicted in Illustration 5.5.2, as we increase the MDSF Market Coverage, the mean of Profit / GASE Ratio increases and this fact is statistically significant.

We can conclude by saying that Research Hypothesis H3a is supported and, effectively, “Distribution channel type has a main effect on Channel Performance”.

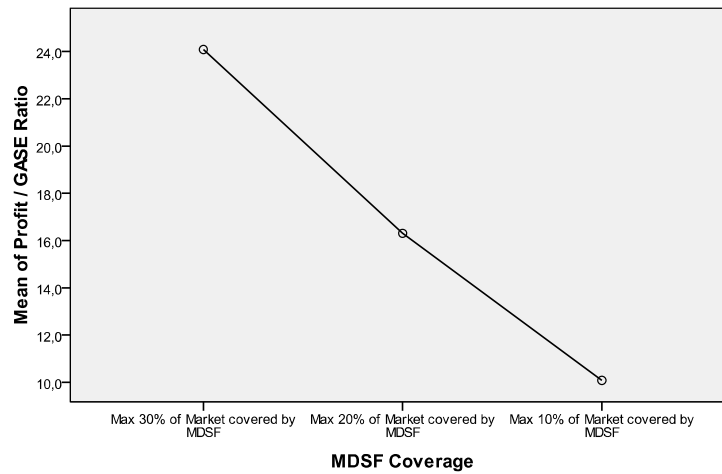


Illustration 5.5.2 – Means Plot – Channel Performance vs. MDSF Coverage

5.5.3 Channel Performance versus Brand

As already explained in Section 3.2.3, in the case of the Manitowoc Company, channel performance's key indicators, like sales, distribution costs and profit, are accounted considering the commercialization of all product types (brands) together. Hence, it is not possible to split channel performance per type of brand. In order to simplify the research, let us assume here that the hypothesis H3b, "Channel performance is independent from the brand", is supported.

5.5.4 Channel Performance versus Sales Area

In order to proceed with our ANOVA test, we need to establish our "null" (H_0) or alternative (H_A) hypotheses, in a way that might support or reject our Research Hypotheses. In relation to Channel Performance versus Sales Area, we can establish the following:

Research Hyp.	Description	Null Hyp.	Description	Alternative Hyp.	Description
H3a	Sales Area has a main effect on Channel Performance.	H3a ₀	In the population, all Sales Areas generate equal mean of Profit/GASE Ratio	H2a _A	In the population, there is some inequality of mean of Profit/GASE Ratio between Sales Areas

Table 5.5.6 – Research, Null and Alternative Hypotheses – Channel Performance vs. Sales Area

As we can conclude from Table 5.5.6, by rejecting the Null Hypothesis, we will be supporting the Research Hypothesis and being able to withdraw our managerial conclusions. Therefore, we will hereafter present the various ANOVA test results.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	853,323	2	426,662	10,148	0,001
Within Groups	882,880	21	42,042		
Total	1736,203	23			

Table 5.5.7 – ANOVA Test results – Channel Performance vs. Sales Area

By reading the ANOVA table we obtain for the F statistic a value of 10,148 with a significance level of 0,001. Therefore, we reject the H_0 and retain the H_A hypothesis which indicates that “In the population, there is some inequality of mean of Profit/GASE Ratio between Sales Areas”. Post Hoc tests (Tukey HSD) indicate a statistically significant mean difference between the Middle East and Iberica. As depicted in Illustration 5.5.3, the Sales Areas which generate the highest means are the Middle East and France & DomTom.

We can conclude by stating that Research Hypothesis H3c is supported and, effectively, that “Sales Area has a main effect on Channel Performance”.

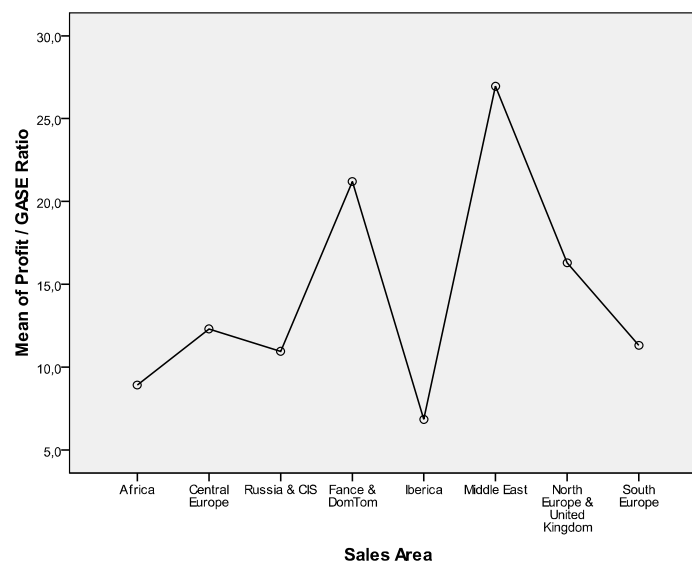


Illustration 5.5.3 – Means Plot – Channel Performance vs. Sales Area

5.6 Summary Discussion

This Chapter started by characterizing the profile of the companies that responded to the questionnaire, thus establishing the research sample profile. Descriptive statistics, such as frequencies, mean, standard deviation, minimum and maximum values, were then used to characterise Customer Satisfaction and Trust and Brand Identity items that were included in the questionnaire. A great majority of the respondent companies are medium and large companies. Roughly half of them have more than 100 employees and most of Manitowoc's customers have extensive business experience, of more than 20 years.

The Chapter continued by addressing Customer Satisfaction and Trust and Brand Identity analysis. Statistical procedures were presented. The variable Customer Satisfaction and Trust was then divided through factor reduction into 4 main components: General satisfaction; Satisfaction with the way of doing business; Satisfaction with pricing, discount and lead time and Trust. The variable Brand Identity was also divided through factor reduction into 6 components: Emotional Value, Perceived Quality, Brand Awareness, Brand Image, Brand Loyalty and Purchase Intention. The analysis continued by creating an interaction between the Customer Satisfaction and Trust and Brand Identity dependent variables (outputs) with the 3 independent variables (inputs). Statistical results were presented and conclusions were formulated. The research hypotheses were, lastly, supported or rejected. Statistical findings evidenced that "Customer Satisfaction and trust is dependent on the distribution channel type"; "Customer Satisfaction and trust is partly dependent on the Brand"; and "Customer Satisfaction and Trust is dependent on Sales Area". Moreover, statistically significant findings also showed that "Distribution Channel Type has a partial effect on Brand Identity"; "Brand has a main effect on Brand Identity"; and "Sales Area has a partial effect on Brand Identity". This allowed us to withdraw the required managerial conclusions.

The last section of this Chapter was dedicated to analyzing the interaction between the Channel Performance dependent variable (output) and the 3 independent variables (inputs). Statistical results were presented and conclusions were formulated. The research

hypotheses were, finally, supported or rejected. We proved that “Distribution Channels Type has a main effect on Channel Performance”; “Channel performance is independent from the brand”; and “Sales Area has a main effect on Channel Performance”. This allowed us to withdraw the needed managerial conclusions.

6. Conclusions

6.1 Summary of Research

This research aimed to answer the problem question: “Distribution channels in a multi-brand environment: a standard or a market adapted policy?” within the context of the Manitowoc Company. As already explored in Chapter 1 and 2, there are several and diverse factors that we must take into account, e.g., international markets, multi-brand environment, industrial distribution channels, channel satisfaction and performance. Since the available scientific literature explores only some of these factors at a time, this research presented an opportunity to combine and further investigate the interaction between all these variables. For example, the conclusions resurfacing from the analysis of channel satisfaction and performance, in parallel with the study of brand identity within an industrial context, might be seen as a contribution of knowledge of the current research. Moreover, it can be used as a reference for managers in B2B markets and convey scientific support for eventual future decision-making.

In terms of structure, the current research is composed of six main chapters. In Chapter 1, a brief Introduction was made concerning the context of the Manitowoc Company and the research problem. A brief summary of the proposed research is described and presented. In Chapter 2, a Literature Review was presented that debated several themes providing the necessary context and supporting the research development. In Chapter 3, the Research Problem and Research Hypotheses were formulated and supported by the available scientific literature. Therefore, three main dependent variables (outputs) were taken into account: Customer Satisfaction and Trust in the distribution channels; Brand Identity of each of Manitowoc’s brands; and also, channel performance. Three independent variables (inputs) were considered: distribution channel type, brand and sales area; and the combination of these results into different values of the dependent values. In Chapter 4, the Research Methodology was presented. The adopted research design, research population, construct measurement and the different statistical techniques were detailed accordingly

and based on the available literature. In Chapter 5, the results of the research were presented and discussed. Hereafter, a brief summary of the findings is presented.

- Descriptive Statistics

Concerning the sample profile and the respective descriptive statistics, 88,6% of the respondent companies corresponded to medium and large companies. Roughly half of Manitowoc's customers have more than 100 employees. 68,8% of Manitowoc's customers have extensive business experience of more than 20 years. Only 13,4% have experience between 10 and 20 years and 17,9% less than 10 years. Manitowoc customers tend to be large companies, with more than 100 employees, with high capital stock spending exceeding 20 million US dollars, generating an annual turnover between 10 and 100 million US dollars, and with more than 20 years of experience.

Regarding the evaluation made by customers on the distribution channel partner, satisfaction is higher when an MDSF (Manitowoc Direct Sales Force) is used. Dealers come in second place and the least popular corresponds to the use of Sales Representatives. When an MDSF is used, Lead Time, Pricing Policy and Discount Policy are the least appreciated items. The Service Quality Level is also not well appreciated. In terms of Dealer use, almost every satisfaction item has a poorer result, especially Lead Time, Pricing Policy and Discount Policy. The availability of products and service solutions presented by Dealers receive a lower score. Customer Satisfaction relative to Sales Representatives is even lower than the one obtained for Dealers. In general and analyzing the whole sample, customers are satisfied with and trust in the Manitowoc's distribution channel network. They state unwillingness to change it and the way they are served. Moreover, customers are on average willing to promote Manitowoc's products and services to peers and third parties. There is, nevertheless, a lower level of enthusiasm on this last item. Three different levels of Brand Identity were identified. The first level corresponds to Potain which presents for all Brand Identity items the highest mean scores e.g. Perceived Quality, Brand Awareness and Brand Image. Customers reveal a high Brand Loyalty towards Potain. The second level of Brand Identity includes Manitowoc, Grove, Shuttlelift and CraneCare with

lower but still positive appreciation. Shuttlelift presents a high Brand Awareness. Manitowoc and Grove brands present a relatively poor Brand Identity. The third level corresponds to National Crane (Brand Identity not determined due to lack of responses). Finally, CraneCare also has a very homogeneous and good Brand Identity.

- Customer Satisfaction and Trust Analysis

The analysis of Customer Satisfaction and Trust revealed that MDSF and Dealers, when used alone, generate higher Customer general satisfaction and Trust than Sales Representative. The channel configuration that generates the lowest general satisfaction and trust is the combination of MDSF and Dealer. Customer Satisfaction with the way of doing business is always higher when an MDSF is used. Satisfaction with discount, pricing and lead time is significantly lower when a Dealer is used alone. Manitowoc and Grove generate higher General Satisfaction than Potain and Shuttlelift. On the other hand, Potain generates higher Satisfaction with the way of doing business than Manitowoc or Grove. Concerning Satisfaction with pricing, discount and lead time, Potain receives higher scores than Manitowoc, Grove and Shuttlelift. Customers tend to trust more in Potain and Shuttlelift brands than Manitowoc and Grove brands. The highest General Satisfaction is generated by France & DomTom and the lowest by Central Europe. Intermediate values are obtained for Iberica, South Europe and Asia & Pacific. In an intermediate, but lower position, we find North Europe & the UK. Concerning Satisfaction with the way of doing business, France & DomTom and South Europe generate higher means than Iberica, North Europe & the UK and Asia & Pacific. The highest mean of Satisfaction with pricing, discount and lead time is generated by France & DomTom and Iberica. The lowest values are obtained for Central Europe and Asia & Pacific. Intermediate values are also obtained for North Europe & the UK and South Europe. Concerning Trust, the highest values are generated by France & DomTom and Asia & Pacific. The lowest mean values are obtained for Central Europe, North Europe and the UK and South Europe. Intermediate values are obtained for Iberica.

To conclude, statistically significant findings support that “Customer Satisfaction and Trust is dependent on the distribution channel type”; “Customer Satisfaction and Trust is partly

dependent on the Brand” and “Customer Satisfaction and Trust is dependent on the Sales Area”.

- Brand Identity Analysis

The analysis of Brand Identity evidenced that MDSF and Dealer alone generate higher means of Perceived Quality and Brand Awareness than Sales Representative and the combination of MDSF and Dealer. MDSF alone generate higher Brand Image than Dealers, Sales Representative and the combination of MDSF and Dealer. MDSF alone and Sales Representatives generate higher Brand Loyalty and Purchase Intention than Dealers and the combination of MDSF and Dealer. Potain generates higher Emotional Value, Perceived Quality and Brand Image than Manitowoc, Grove and Shuttlelift. Potain and Shuttlelift generate the highest Brand Awareness, Brand Loyalty and Purchase Intention. France & DomTom and South Europe generate the highest Emotional Value, Perceived Quality and Brand Image and Central Europe and North Europe & the UK the lowest values. France & DomTom and South Europe also generate the highest Brand Awareness and Central Europe and Iberica the lowest values. France & DomTom alone generates higher Brand Loyalty value than all other Sales Areas. France & DomTom and Asia & Pacific generate the highest Purchase Intention.

To conclude, statistically significant findings support that “Distribution Channel Type has a partial effect on Brand Identity”; “Brand has a main effect on Brand Identity” and “Sales Area has a partial effect on Brand Identity”.

- Channel Performance Analysis

The analysis of Channel Performance statistically proved that, as we increase the MDSF Market Coverage, the mean of Profit / GASE Ratio increases as well, confirming the findings also obtained in Stock and Lambert’s (1983) work. Proof of this is the rather different channel performance ratios obtained for France & DomTom, where an MDSF has a stronger presence, and for Central and South Europe, where the MDSFs are less visible to

final customers. We can conclude by saying that, indeed, “Distribution Channels Type has a main effect on Channel Performance”. For the previously explicated reasons, it is not possible to split channel performance per type of brand. Hence, we assume here that “Channel Performance is independent from the brand”. As a consequence of the Channel Performance dependability on distribution channel type, we can deduce that there are also differences in this variable depending on the Sales Area. Differences in Channel Performance between e.g. the Middle East and Iberica have also been statistically proven. The Sales Areas which generate the highest performance ratios are the Middle East and France & DomTom. We can conclude by stating that “Sales Area has a main effect on Channel Performance”.

Hypothesis	H1a	H1b	H1c
Description	Customer satisfaction and trust is independent from the distribution channel type	Customer satisfaction and trust is independent from the brand	Customer satisfaction and trust is independent from the geographical area
Result	Rejected	Partially rejected	Rejected
Hypothesis	H2a	H2b	H2c
Description	Distribution channel type has a main effect on Brand Identity	Brand type used has a main effect on Brand Identity	Geographical area used has a main effect on Brand Identity
Result	Partially supported	Supported	Supported
Hypothesis	H3a	H3b	H3c
Description	Distribution channel type has a main effect on Channel Performance	Channel performance is independent from the brand	Sales Area has a main effect on Channel Performance
Result	Supported	Supported	Supported

Table 6.1.1 – Research Hypotheses Statistical Test Results

In Chapter 6 (current chapter), a summary of the research is presented and managerial conclusions are formulated. Moreover, the research problem is finally answered. Additionally, the limitations and the difficulties encountered during the research are identified and some possible further investigations are proposed.

6.2 Managerial Conclusions

One of the first and main conclusions that can be drawn from the sample profile analysis is that, typically, Manitowoc customers tend to be large companies, with more than 100 employees; with high capital stock spending exceeding 20 million US dollars; generating an annual turnover between 10 and 100 million US dollars and with more than 20 years of experience. This finding leads us to think that Manitowoc is especially concentrated on medium and large accounts, eventually underestimating the importance of small accounts. It is a strategic decision from a company standpoint whether or not to pursue this opportunity, as Sharma. and Mehrotra (2007) suggest. It is also interesting to verify that the majority of Manitowoc's customers have extensive business experience, of more than 20 years. Therefore, Manitowoc could eventually focus on trying to find newer customers on the market.

Concerning the evaluation made by customers of the distribution channel partner, satisfaction is always higher when an MDSF (Manitowoc Direct Sales Force) is used. In terms of Dealer use, almost every satisfaction item has a poorer result. Customers are more satisfied with the prices and discounts presented by the MDSF than the ones practiced by Dealers. Worthy of note is also the availability of products and service solutions presented by Dealers which receive a lower score. When compared to an MDSF, Dealers are less capable of presenting all products and services that customers wish for. When compared to an MDSF, customers feel less committed towards Dealers. Moreover, customers are satisfied with and trust in the Manitowoc's distribution channel network. They state unwillingness to change it and the way they are served. Furthermore, customers are on average prompt to promote Manitowoc's products and services to peers and third parties. There is, nevertheless, a lower level of enthusiasm on this last topic. As a natural consequence of this fact, Manitowoc should always bear in mind that an MDSF is a must-have in terms of customer satisfaction, this being a standard factor taken into account for the distribution channels strategy definition.

Potain presented the strongest Brand Identity amongst Manitowoc brands. Manitowoc and Grove brands presented a relatively poor Brand Identity. This allows us to consider that Manitowoc should dedicate increased effort to promoting, at least in EMEA and APAC, the Manitowoc, Grove, Shuttlelift and National Crane brands.

Since the combination of MDSF and Dealer serving, in parallel, one specific customer generates the lowest General satisfaction and Trust we can conclude that, while dealing with two parallel channels, customers may perceive channel conflict (Kim, 1998). They can also compare the performance of both channels and identify eventual discrepancies, increasing discontent and conflict within the channel configuration. This finding also confirms Bellhouse and Hutchison's (2007:569) research which indicates that "*higher channel performance was observed among the single channel cases*" leading to higher channel satisfaction (Kim, 1998). Consequently, Manitowoc should always apply one single type of distribution channel to serve a specific customer.

Satisfaction with the way of doing business is always higher when a MDSF is used. Therefore, Manitowoc should train and guide Dealers and Sales Representatives on how to address customer's needs and requirements on the way of doing business¹.

Satisfaction with discount, pricing and lead time is significantly lower when a Dealer is used alone. This fact can be explained because customers perceive Dealers as intermediaries between themselves and the manufacturer, adding their margin and operational costs to distribution chain. For this reason, customers feel that Dealers present more expensive prices and lower discounts. Although Manitowoc's distribution channels seem unrealistic without Dealers, it is nevertheless true that their pricing and discount policies should be controlled and monitored in order to meet customers' expectations, improving their satisfaction.

¹ Specific items can be consulted in Table 5.3.1

The highest Customer's General satisfaction and Trust scores are systematically obtained for France & DomTom. This sales area should therefore, be set up as case study and analyzed further, trying to understand why all items receive the best scores from customers. Findings should then be used to establish an action plan. This action plan should subsequently be applied to other areas.

The highest Brand Identity scores are systematically obtained when an MDSF is used. The way which an MDSF uses to promote the different Manitowoc brands should be set up as a case study and analyzed further. We should try to understand why all items receive the best scores from customers. Findings should be used to establish an action plan. This action plan should be implemented by Dealers and Sales Representatives in order to improve the Brand Identity generated by them.

It has been statistically proven that, as we increase the MDSF Market Coverage, Channel Performance increases also. This finding is very important for Manitowoc since it indicates a solution for improving the channel performance in the short term. It is necessary that every Sales Area, presenting low direct market penetration, reinforces the MDSF channel. Middle East and France & DomTom's distribution channel configuration can eventually be set up as a reference for the coverage split between MDSF, Dealers and Sales Representatives.

We are now ready to provide the necessary answer to the research problem "what is the policy that generates the highest Customer Satisfaction and Trust, Brand Identity and Channel Performance in the long term, in terms of distribution channels, for a multi-brand construction equipment manufacturer serving international markets: a standard and common strategy applied in every region; a set of individual market adapted strategies tailored to each region/country; or a hybrid solution composed by the previous two?". The answer to the research problem can finally be summarized in Table 6.2.1 henceforward.

Dependent Variable		Managerial Conclusion
Customer Satisfaction and Trust	General Satisfaction	The highest scores are systematically obtained for France & DomTom. This sales area should be set up as a case study and analyzed further, trying to understand why all items receive the best scores from customers. Findings should then be used to establish an action plan and applied on other areas.
	Satisfaction with the way of doing business	Satisfaction with the way of doing business is always higher when a MDSF is used. Manitowoc should train and control Dealers and Sales Representatives in how to address customer's needs and requirements concerning the way of doing business.
	Satisfaction with pricing, discount and lead time	Satisfaction with discount, pricing and lead time is significantly lower when a Dealer is used alone. Pricing and discount policies should be controlled and monitored in order to meet customers' expectations, improving their satisfaction.
	Trust	The highest scores are systematically obtained for France & DomTom. This sales area should be set up as a case study and analyzed further, in an attempt to understand why all items receive the best scores from customers. Findings should then be used to establish an action plan and applied to other areas.
Brand Identity		The highest Brand Identity scores are systematically obtained when an MDSF is used. The way that MDSF uses to promote the different Manitowoc brands should be benchmarked and analyzed further. We should try to understand why all items receive the best scores from customers. Findings should be used to establish an action plan and implemented by Dealers and Sales Representatives, in order to improve the Brand Identity generated by them.
Channel Performance		As we increase the MDSF Market Coverage, Channel Performance increases also. It is necessary that every Sales Area, presenting low direct market coverage, reinforces the MDSF channel. The Middle East and France & DomTom's distribution channels configuration can be set up as a reference for the coverage split between MDSF, Dealers and Sales Representatives.

Table 6.2.1 – Managerial Conclusions

It appears that the previous managerial conclusions indicate the establishment of a serious of standard policies. Nevertheless, we should consider that the application of a uniform policy across countries, cultures and mentalities has its own risks (Samiee and Walters, 2006). Because the implementation of a standard policy surely has a strong impact on Customer Satisfaction and Trust, Brand Identity and, ultimately, Channel Performance (Coelho, Easingwood and Coelho, 2003), we should constantly monitor these indicators and readjust the policy if needed. Even so, the findings obtained by the current research clearly favour the deployment of a standard policy for the distribution channels in a multi-brand environment, composed and based upon the elements proven to generate the best results for each dependent variable.

6.3 Research Limitations and Further Research

One of the most evident limitations of the current research is the non-existence of responses coming from Africa, Russia & CIS and the Middle East. It would be important to obtain responses coming from all sales areas, including the Americas Region, with a minimum acceptable response rate. Somewhat connected to this limitation, it is also true that in this line of business, this kind of research is still unpopular. Aiming to increase the response rate, alternative survey methods could be utilized such as telephone or personal interviewing (see Table 4.2.1). These methods have more success when compared to remote interviewing through E-mail or the Internet (Malhotra, 2010). Moreover, interviewing could be outsourced by hiring companies specialized in this kind of service. These companies have professionalized methods and are very efficient concerning the collection of survey responses.

Additionally, salesmen, dealers and sales representatives perceived this study as an evaluation of their performance. They were afraid of possible negative consequences if results proved to be poor. Consequently, a negative posture towards this kind of initiative was adopted and, in some cases, they even impeached it. As an example of this, we could mention the Americas Region where Dealers vetoed the survey.

Concerning the assessment of the variable Channel Performance versus channel type, the financial data is not structured in a way that allows us to analyze sales generated specifically by the MDSF, Dealers or Sales Representatives. Also, as already explained in Section 5.5.3, in the case of the Manitowoc Company, Channel Performance's key indicators, like sales, distribution costs and profit, are calculated considering the commercialization of all product types (brands) altogether. Hence, it is not possible to split channel performance per type of brand. Moreover, sales values and GASE relative to APAC Region were not available.

We could adopt, in future, other financial, economic or marketing indicators such as ROI, ROA, EVA, *“gaining new customers, market share and sales growth”* (Coelho,

Easingwood and Coelho, 2003:565). It would be crucial if Manitowoc could implement cost and benefit trade-off analysis and evaluate sales and profit generated by each specific distribution channel type, as suggested by Sharma and Mehrotra (2006) in Tables 2.4.1, 2.4.2 and 2.4.3.

Still within Channel Performance, another difficulty is that Manitowoc does not keep any record or database of final customers making the analysis even more complex. If CRM could be implemented, it would constitute a powerful tool in order to identify more accurately all Manitowoc final customers and end users. This way, we would have instant access e.g. to the number of new accounts, the number of accounts lost and the specific salesman who had originated each sale. Furthermore, we could more easily determine the size of each market and, therefore, refine our market share and coverage assessment.

One of the most interesting findings of this research is that customer satisfaction variables are systematically higher for France & DomTom Sales Area and for the MDSF. It would be relevant to set up this Sales Area and this distribution channel type as case studies and analyze why this phenomena occurs. The same approach could be applied to further analyze Channel Performance. In this case, the Middle East and France & DomTom could be benchmarked.

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Attachment 1 – Questionnaire’s Covering Letter

Attachment 2 – Dealer Information Letter

Attachment 3 – Questionnaire