

UNIVERSIDADE DO VALE DO RIO DOS SINOS – UNISINOS
MANAGEMENT GRADUATE PROGRAM
MASTER'S DEGREE

GIOVANNI BOHM MACHADO

**VALIDATION OF A SURVEY INSTRUMENT FOR MEASUREMENT OF
INSTITUTIONAL AND PSYCHOLOGICAL DRIVERS THAT INFLUENCE
MANAGER OUTSOURCING DECISION**

São Leopoldo

2015

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Dissertation presented to the Graduate Program in Business Management as a requirement for Master of Business Management degree from Universidade do Vale do Rio dos Sinos – UNISINOS.

Advisor: Ph.D. Rafael Teixeira
Co-advisor: Ph.D. David Caleb Hall

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2015

Ficha catalográfica

M149v Machado, Giovanni Bohm

Validation of a survey instrument for measurement of institutional and psychological drivers that influence manager outsourcing decision / por Giovanni Bohn Machado. – 2015. 112f.

Dissertação (mestrado) — Universidade do Vale do Rio dos Sinos, Instituto de Ciências Econômicas, Administrativas e Contábeis, 2015.

“Orientação: Prof. Dr. Rafael Teixeira, Ciências Administrativas,”.

1. Administração de empresas – Terceirização. 2. Terceirização – Processo decisório. 3. Processo decisório – Terceirização – Pesquisa. 4. Terceirizações – Variáveis institucionais e comportamentais - Pesquisa I. Título.

CDU 658.64

Catálogo na Publicação:

Bibliotecária: Carla Inês Costa dos Santos. - CRB 10/973

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Approved on December 10th, 2015.

EXAMINERS

Ph.D. Ely Laureano Paiva – FGV

Ph.D. Ivan Lapuente Garrido – UNISINOS

Ph.D. Luciana Marques Vieira – UNISINOS

Ph.D. Rafael Teixeira – UNISINOS - Advisor

ACKNOWLEDGMENTS

During my trajectory in the master's program, some people were always by my side, encouraging and supporting my actions. My gratitude goes to:

My beloved wife Juliana, for the unconditional love and support.

My son Gabriel, despite deprived of his dad's company, always a comprehensive and loving child. Daddy loves you so much.

My advisor, Ph.D. Rafael Teixeira, for the patience, support, capacity, talent, and partnership at all times. You are the best!

My mother Jane and my aunt Tania, for their support and encouragement to never give up of my dreams. These are my "two" mothers who I love so much.

My dear and beloved grandmother Selma, who left us last year, but still lives inside my heart.

My friends and master's colleagues by moments of seriousness and comfort spent together.

ABSTRACT

Outsourcing is a reality in the globalized world. In Brazil, it was recently approved by the National Congress the so-called "law of outsourcing," which in practice defines more flexible rules for organizations to outsource their core activity – something that used to be prohibited. This flexibility can lead organizations to obtain competitive advantage due to the costs associated with the outsourcing tending to be lower. However, there are issues relating to the products quality and services that must be taken when the decision is taken by managers. The outsourcing decision is still less explored in the academic environment. The majority of studies related to decision-making tend to analyze institutional and cognitive issues differently. However, there are few studies correlating the two areas, when taking into consideration the behavioral aspects of the individual and the institutional structure of their organizations. The present research aims to validate a research instrument that aims to measure the institutional and behavioral variables that influence outsourcing decision. A survey was performed through a questionnaire composed of 75 questions capable of measuring five major constructs: locus of control, monitoring practices, bandwagon effect for outsourcing, cost and quality dynamics and perception of cost and quality mandate. The instrument was created by Ph.D. David Caleb Hall from Wright State University in the United States. A sample of 204 respondents was collected. Statistical tests were performed to validate the scale, among them, convergent validity tests such as the confirmatory factor analysis (CFA), composite reliability (CR), Cronbach's alpha (CA), average variance extracted (AVE). Also, tests were performed to check the discriminant validity. The general results partially achieved the goal of this work. More than 50% of the questions had to be eliminated, as a result of sampling error, little experience of the participants in the situations described, problems in understanding of the issues, institutional issues, and personality trait of the respondents.

Keywords: Outsourcing; Decision-Making; Behavioral Decision; Institutional Decision.

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1 INTRODUCTION

Williamson (1975) argues an issue that even today can be considered decisive for many organizations: market or hierarchy?

Bill 4330/04, known as "the Outsourcing Law," has been recently discussed in the Brazilian Congress. This project was being processed for 10 years in the House of Representatives and has been discussed since 2011 by congressional representatives of unions and employers' associations. It provides for the hiring of outsourced services for any activity as long as the contractor is focused on a specific activity.

In practice, the bill regulates outsourcing to the core business, i.e. the main activity. Currently, a transport company cannot hire a third-party driver, but the maid service, for example, can be done by a service provider. Similarly, automakers cannot outsource metalworkers, because these are functions for core activities. Today only outsourcing support activities is allowed, i.e., cleaning staff, reception, telephony, security and information technology, for example.

The contractor shall have sole purpose compatible with the contracted service. The existence of more than one object when the activity falls in the same area of expertise is permitted. This prevents the hiring of umbrella companies, which offer security services, cleaning and transport, for example. The project also proposes that the company's responsibility contractor for compliance with the labor rights of the outsourced employee, such as holiday pay and maternity leave, is a subsidiary. That is, the company that hires the service is activated in court only if the goods are sold out the outsourced firm when the contractor does not meet the labor obligations and after answering previously in court. At the same time, the contractor could be driven directly by outsourced workers, but only when not monitoring compliance of labor obligations by the contractor.

In the case of joint liability, the third party can only collect payment rights of the borrowing company service after exhausting the assets of the third party. In the joint, being currently outsourced, it can charge both the company that outsources much of borrower services.

The contractor will have to monitor the monthly payment of wages, over-time, 13th salary, vacation, among other rights, the outsourced company. The responsibility for paying social security charges and income tax for the outsourced employees is up to the contractor, and not more than that outsources the service. Before, the contractor's responsibility was only to supervise the entire month compliance with these payments.

The concern of the government was that the contractors did not comply with the payment of taxes. The assessment is that it is easier to control payments if they are made by the company that hires the service.

This bill is dividing opinions in the country. Entrepreneurs argue that the project can help reduce informal work in the market.

As for workers' representatives, these believe that the approval of the bill could lead to precarious working conditions. Failure to pay workers' rights and companies ceasing operations prior to repaying debts to workers are among the most recurrent complaints of those who work as contractors.

When it comes to outsourcing, Brazil is far behind as compared to other countries. China, United States, and several European countries have much more flexible rules than Brazil has.

There are reports that the start of the outsourcing has taken place about 200 years ago when an insurance company hired a group of firefighters to protect insured homes in Britain. Under Margaret Thatcher in the 1980s, outsourcing has gained momentum with the creation of specific laws. The British government passed a law to protect the rights of employees transferred from the public to the service companies. This was considered a breakthrough in relations with the employee.

In the United States, contracts are much simpler. One can hire by the hour and an intermediary company between employer and employee is not required. There is much more flexibility in contracts. Salary can be negotiated directly with the prospective employee. Companies typically take into account the cost of the worker, and the value of service is discussed individually. Developing countries seem to have serious restrictions as far as outsourcing is concerned. Outsourcing could be, for example, a great outlet for the government, which in times of strong crisis, could no longer operate a generally stuck machine to become a client. So

one can negotiate better contracts and require the best services and substantially save important resources for the nation.

The "Law of Outsourcing" project was approved in April 2015 by the National Congress. However, there is no belief that these new measures will be efficacious for the Brazilian economy and its benefits for businesses and employees of these companies are still unclear.

When it comes to outsourcing, one cannot fail to appreciate that there are costs associated with the operation of the market and these are associated with the conduct of transactions. In this sense, the theory of the firm seeks to understand what the components of these costs are and how resource allocations can occur more efficiently for the production operation and related activities (COASE, 1937).

In this sense, The Transaction Costs Economics Theory (TCE) describes how to create a more efficient operation of businesses, given certain characteristics (WILLIAMSON, 1985). Williamson reveals a way of thinking about the strategy of companies taking into consideration the reduction of costs through planning. This plan is nothing more than negotiating what is possible and always studying alternatives to internalize processes. In most of his works, Williamson defends, even between the lines, his appreciation for internalization rather than outsourcing of core business organizations. Confirming this thought, Williamson (1985) describes that managers should choose internalizing any transaction that has a high degree of asset specificity and high behavioral uncertainty, because the risks and costs associated with outsourcing are immense, creating inefficiencies in the process. On the other hand, managers should outsource activities in order to reduce bureaucracy, internal organization and obsolescence costs (WILLIAMSON, 1985).

Understanding which elements can lead a manager to choose to outsource is important for operations area. Are technical elements analyzed? When making a decision, should personal issues influence? Is there pressure from the company and its competitors to stimulate a manager making an outsource decision?

Typically, outsourcing is advocated as a strategy for decrease production costs (XIAO; GAIMON, 2003). When one needs to define what to produce in-house and what to outsource, this is the process known as make-buy decision,

since in production environments, the firm must decide which part of a product to manufacture and which should be acquired from a particular supplier (ULRICH; ELLISON, 2005).

For Teece (1986), outsourcing exposes a firm to leakage of non-patentable, intellectual property. Thus, the firm will take self-protection measures to reduce the leakage of such property, and goods and services having a safe intellectual property protection scheme, can be outsourced, otherwise they will be carried out internally within the firm.

Managers tend to outsource production by considering lower costs at the expense of quality, through their intuition and personal experiences with suppliers, based on most noticeable items in the process such as costs involved (HALL, 2012).

Also according to Hall (2012), there are three characteristics that can help to understand the dynamics of the decision to internalize or outsource production by a manager: (1) what managers consider as important may not have such a decisive influence on the decision-making process; (2) uncertainty may be a factor that induces outsourcing; and (3) individual experiences and aspects – including cognitive – may play a significant role in the decision-making process.

There are many studies in marketing about the individual decision-making process (LARAN; SALERNO, 2003; LARAN; JANISZEWSKI, 2011; MAY; IRMAK, 2014). However, in operation's area, very few studies address issues related to institutional and psychological factors that lead an individual to make a decision.

Specifically in this work, two constructs used in some works in human behavior and operation areas will be covered: locus of control and the "bandwagon effect." The first one is widely used in psychology and deals primarily with the individual and the internal and external influences that surround it. The second one is the external influence of competitors, so that the same or similar measures are taken to what is being practiced in the market.

There are no research instruments with valid and reliable scales to measure institutional and psychological issues within these constructs. At most, scales exist that measure separately some issues of the constructs.

At the same time, some psychological and institutional theories will be brought in this study in an attempt to explain and examine individual behavior

patterns in decision-making, whether by internal/external influences, personality, pressure and other conditions faced by the decision maker.

Based on this evolutionary process of institutional, behavioral, and psychological dynamics, it is necessary to answer to the following question: What are the required measures to validate a survey instrument with objective is understanding the institutional and psychological drivers that lead an individual to make an outsource decision?

The central objective of this work is to validate a survey instrument that contains institutional and psychological drivers that can influence the managers to make an outsource decision. More specifically, the primary intention is to understand how institutional and psychological statements affect and set the manager's decision.

This work is a collaborative effort with Ph.D. David Caleb Hall from Wright State University in the United States, whose research in supply chain's area – more precisely on the issues related to manufacture and outsourcing decision – inspired and conducted the actions of this work.

Professor Hall was doctoral colleague of Ph.D. Rafael Teixeira, advisor of this work. Both are academic partners, and also write and publish works together. In one of these conversations, Professor Hall commented about their doctoral thesis results and the creation of a scale for measuring institutional and psychological drivers in individuals responsible for decision-making. Professor Teixeira then suggested to Professor Hall to test this instrument in Brazil, through the work of one of his students, the master's graduate student Giovanni Bohm Machado.

Since then, Professors Teixeira and Hall, with the author of this work, have maintained constant contact arguing about the instrument and debating the validation issues related to Brazilian environment.

Professor Hall has systematically provided information about theories and constructs used for the creation of the instrument and has provided important data for construction of this work. His function has been as a co-advisor and his contribution is extremely valuable to the success of this work.

The idea is to validate that survey instrument and verify if it is also suitable to the reality of Brazilian managers. Therefore, statistical tests will be used for

instrument validation, such as confirmatory factorial analysis, convergent validity, composite reliability, average variance extracted, and other reliability tests.

The following chapters will describe all theories and constructs serving as the foundation for the research and the methodology to be applied for this study.

2 LITERATURE REVIEW

Theories and constructs that support the development of this work will be presented in this topic, divided into personality, bounded rationality (satisficing), locus of control, institutional theory, transaction costs economics, resource-based view, supply-management risk, bandwagon outsource, cost and quality dynamics, and cost and quality mandate.

2.1 Outsourcing Decision: A behavioral perspective

The work developed in this research is based on the studies of Professor David Caleb Hall from Wright State University in the United States of America. This chapter addresses Hall (2012) thesis.

Hall's 2012 doctoral thesis examines how managers make and perceive supply chain governance decisions. According to Hall (2012), managers tend to choose a governance form that will manage risks while pursuing benefits. Some theories explain in part this consideration between risks and benefits, like agency theory, resource-based view, and transaction cost economics.

Despite all available information, managers are still boundedly rational and fail to examine the conditions and process relevant information of the same.

According to Hall (2012), there is a strong gap in literature on the decision-making process because it does not provide or study cognitive issues such as attention, emotions, and feelings that can influence decision-making.

In his work, Hall (2012) tested a theoretical model (figure 1) that seeks to explain how managers make decisions on the governance of the supply chain.

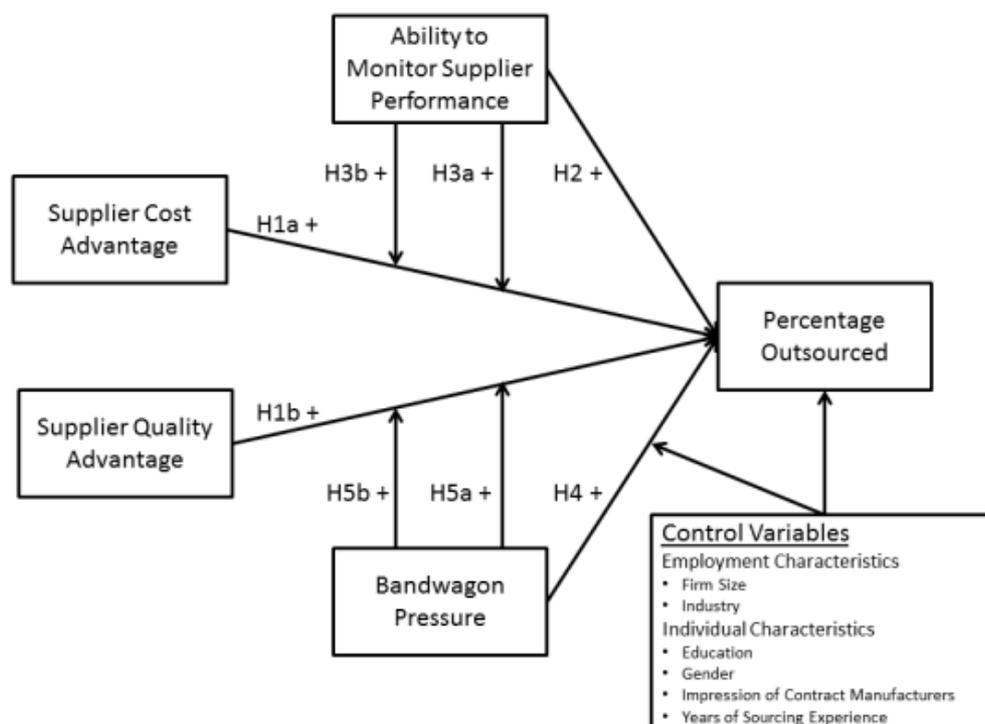
He uses an experimental method to collect his empirical data, in order to evaluate which variables were more important to influence the decision-making process.

According to his search, decisions are made by managers and may be influenced by several variables, so he uses a scenario-based role experiment to

control organizational constraints. These organization problems normally consider lower costs, good resources supplied or produced with lower risk. Thus, so he tried to answer the questions: how do managers choose to satisfice in governance decisions? What are the biases that influence a manager's sourcing choice? How does a manager perceive the risks and benefits associated with their decision?

Trying to answer these questions, Professor Hall developed some hypotheses related to the variables: cost, quality, and monitoring, and in order to test them he developed eight different scenarios ranging these variables between Low and High. The hypothesized model is described in figure 1. The respondents of his experiment application, received one of these eight scenarios, and were supposed to answer a questionnaire in written. With these answers in hands, he made some statistical tests to confirm some of these hypotheses and reject those not strongly perceived on respondents' answers.

Figure 1. Hall (2012) hypothesized model



Source: Hall (2012).

In summary, he found that cost and quality capabilities act to increase outsourcing. In contrast, difficulty in monitoring suppliers' performance has no moderating influence on supplier quality advantage, because managers may be overconfident about their ability to monitor supplier's quality advantage but not their cost advantage. This is mainly because managers may believe that supplier cost opportunism is likely to occur, different from supplier quality opportunism.

Professor Hall organized his respondent answers by considering their work experience, and so he realized that managers with more sourcing experience are not so likely to be influenced by pressure from the bandwagon effect, because outsourcing bandwagon may be a psychological phenomenon instead of an institutional one. Besides the work experience, he also used other control variables such as Employment Characteristics (firm size and industry) and Individual Characteristics (education, gender, impression of contract manufacturers and years of sourcing experience).

Hall (2012) determines the variable used in his study based on the literature where he founded three general categories: lowest cost, most desirable resources, and lowest risk. Lowest cost may be the most efficient transaction structure managers will use (WILLIAMSON, 1985), the most desirable resources managers should acquire (BARNEY, 1999) and with lowest risk as related to efficiency (lowest transaction costs) and effectiveness (best resources). Therefore, both efficiency and effectiveness may not be attainable if risks are realized. Nevertheless, achieving efficiency, effectiveness, or low risks is becoming more complex.

Hall (2012) limits his investigation on supplier cost and quality advantage and disadvantage because of low cost and conformance quality, which occurs when a potential supplier has a low production cost than the firm or a higher quality production capability than the firm. He also states that managers may be influenced by the ability to monitor supplier performance and the possibility of opportunism; managers were expected to prefer less outsourcing when their firm is unable to monitor a potential supplier's performance and would be more confident in a familiar domain, which may result in an illusion of control, and may overlook the ability to monitor supplier when outsourcing.

Likewise, Hall (2012) describes that managers are influenced by bandwagon pressure to outsource because of social pressure, subjectively

informed about their competitor decision or social proof of the correct course of action, and will reduce criticism by mimicking competition.

Based on Professor Hall's explanation of these variables, is important to understand Transaction Cost Economic, Agency Theory and Resource-based View, as same as risk explanation, as a way to explain the use of these variables on sourcing decision. He argues that manager from firms with competitive cost or quality capabilities should limit their outsourcing to retain their firm's competitive advantage (GRAY; ROTH; TOMLIM, 2009). Nevertheless, buyers with expertise to control what suppliers are doing play an important role in decision-making, influencing transaction costs, and inducing company to outsource to gain competitive advantage (WILLIAMSON, 1975).

Frame 1 summarizes his hypothesis and the results he found.

Frame 1- Summary Hypotheses and Results – Source

(continue)

HYPOTHESES	RESULTS
H2a (H1a): The relationship between supplier quality advantage and the percentage outsourced is reduced when the buying firm's ability to monitor supplier performance is low.	REJECTED – the relationship between the supplier's quality advantage and the percentage of outsourcing does not depend on the ability to monitor the supplier's performance. This may be attributed to manager's overconfidence assuming that a supplier's quality will not change when monitoring is difficult.
H1b: Supplier quality advantage relative to the buying firm has a positive influence on the percentage outsourced.	SUPPORTED – Managers may increase the percentage of outsourcing to suppliers when a contract manufacturer has some quality advantage.
H1a (H2a): Supplier cost advantage relative to the buying firm has a positive influence on the percentage outsourced, ceteris paribus.	SUPPORTED – Managers may increase the percentage outsourced to suppliers with cost advantage. Simply put managers, outsource more when a contract manufacturer has a cost advantage.
H3a (H2b): The positive relationship between supplier cost advantage and the percentage outsourced is reduced when the buying firm's ability to monitor supplier performance is low.	SUPPORTED – When suppliers have cost advantage and ability to monitor the percentage outsourced is influenced.
H2 (H3): The ability of the buying firm to monitor supplier performance influence the percentage outsourced.	REJECTED – This results from manager's overconfidence on their firm's ability to detect supplier malfeasance and overlooking increased transaction costs resulting from increased risks. In short, this finding suggests managers may be complacent and suppliers may benefit from pursuing opportunistic behavior.
H4 (H4a): Bandwagon pressure has a positive influence on the percentage outsourced, ceteris paribus.	SUPPORTED – supply chain decisions are influenced by the actions of the competition. There is a significant and positive relationship between bandwagon pressure and percentage outsourced

(conclusion)

HYPOTHESES	RESULTS
H5a (H4b): The relationship between supplier cost advantage and the percentage outsourced is increased when bandwagon pressure increases.	REJECTED – Managers are not increasing their outsourcing due to cost may not directly influence on bandwagon pressure
H5b (H4c): The relationship between supplier quality advantage and the percentage outsourced is increased when bandwagon pressure increases.	REJECTED – Managers, on average, are not increasing their outsourcing because they are not jumping on the bandwagon to increase quality

Source: Elaborated by the author

Some of Professor Hall's findings were that managers may be selective in the type of opportunism that influences their governance decision – particularly, they seem to be concerned with opportunistic renegotiation but not quality shrinking. The other conclusion is that managers are socially influenced to jump on the outsourcing bandwagon and managers may assess risks and benefits of their governance decisions based on their feelings. Moreover, this assessment process may be biased such that risk and benefit are perceived to be negatively, not positively, related. His work has found support for the "risk as feeling" proposition and additionally that both cost and quality influence the governance decision, but play a different role in how managers perceive risks and benefits (HALL, 2012).

2.2 Bounded Rationality (Satisficing)

The principle of bounded rationality assumes that to deal with the complexities of the real world, an individual must build a simplified model for each situation. Because of this, Herbert Simon, Nobel laureate, suggested that humans use a decision strategy that he called "satisficing" (NEWELL; SIMON, 1972).

Simon (1957) argues that human mind has limitations in its cognitive and computational capabilities, introducing the concept of bounded rationality. The same author proposed that rational judgment is subject to deviation, since human ability is limited. The author emphasizes that the decision makers do not have the ability to have access to all the possibilities for action and measure all the

alternatives due to their physical disability and the high cost of the process. Thus, it is not possible to achieve a great decision, but a satisfactory and acceptable decision.

Humans have difficulties to consider and evaluate all the options involved in a choice, and usually consider only a few options to make decisions. In every human decision-making, only in exceptional cases individuals seek alternatives considered as optimal. In most cases, decisions are always below the optimal level (NUNES, 2006).

The Theory of Bounded Rationality, or Satisficing, puts into question the rational algorithm of thought, recommended by classical decision theory. If earlier subjects were able to assess the problem situations under a cold and calculating perspective, analyzing all available options and their consequences, now they found that there are limitations in the decision-making process.

The Satisficing Theory is essentially based on the idea that humans act rationally, but limited to their cognitive ability. That is, before a need for action, the subjects do not evaluate all available options given the infinite range of alternatives.

Much of this limitation in decision-making is explained by the fact that we are not fully informed when we are faced with something to be decided. Knowledge of all information is one of the assumptions of classical decision theory. A significant part of the problem is composed of scenarios where ratio of asymmetric type prevails, that is, the level of information that the individual has of the situation – however great the prior knowledge of the individual, their previous experience accumulated or their level of expertise – is always partial, finite, and limited (NUNES, 2006).

The main points of the Theory of Bounded Rationality revolve around the following assumptions (NUNES, 2006):

- Contrary to the classical theory, subjects do not consider all possible decision options, due to a limited review of the decision scenario;
- The choice of options is made by selecting a finite range of alternatives that are presented in the cognitive horizon of the individual;

- Given this limited range of options, the individual makes the decision by applying the calculated utility cost and benefit, that is, the option chosen is one that provides the highest gain possible to lower expenses involved;
- The options are evaluated one by one, and the choice is one that minimally satisfies the acceptability criteria established by the individual;
- Therefore, decisions are made from a finite horizon of options, are selected against a minimum criterion of acceptability, resulting in acceptable, but not optimal choice of options.

Since market pressures compel organizations to often take decisions on an urgent basis, then comes the need for a required skill for their managers: recognizing those decisions that really require a more careful analysis and devote their precious time to them. In the personal life of individuals, there is a similar process, as they are also under pressure in different ways and should have the ability to discern whether it is worth or not a more detailed analysis when situations arise.

2.3 Personality

Personality is a very distinctive feature of every human being. We can say that each person has a unique personality, but with some features that are simulators of each other.

Kolb (1977) defines personality as a distinctive group consisting of standards and permanent behavioral tendencies of a particular individual. The same author argues that at birth, the individual already carries with him a predisposition, registered patterns or potential to develop his personality, but this will happen depending on the successive stages of their development.

Quoting Freud, Kolb (1977) describes the formation of personality from three dimensions: (1) the *id*; (2) the *ego*; and (3) the *superego*.

Id is the instance in which the most primitive impulses of the individual reside, where basic physiological assumptions as to the act of breathing, eating, physical self-preservation, sexual instinct, and procreation are stationed. The *id* is considered the psychic source of personality, where instincts of creation and destruction of life operate (KOLB, 1977). According to the author, the *id* operates

by the principle of pleasure, satisfaction of desire, whether for life or destruction. The goal is the immediate gratification of the senses.

For Freud (1968), *ego* is the part of the personality that comes from the *id*. It is a part of the *id* modified by the influence of the outside world, such as the influence of social environment, parents, and work, among others. *Ego* is considered as the executive's personality that seeks to satisfy the needs and instincts of the *id*. *Ego* establishes the relationship between external reality and the inner world of the person, seeking solutions to the needs of these realities.

The *superego* is made of the relationship with the important people in a child's life. It is where they form the ethical standards of conduct, moral, etc. The *superego* is formed in childhood, under parental guidance. It refers to the inner values of the child that are transmitted by parents or people in your life. All these values are represented by rewards and punishments. It is through the *superego* that an individual chooses to either behave according to his/her previous record of right or wrong (FREUD, 1968).

According to Pervin and John (2004), personality traits can take three important functions: (1) they can be used to summarize, predict and explain the behavior of a person – one reason for the popularity of personality traits is that they provide cost-effective ways to summarize how individuals differ; (2) the traits allow predictions to be made about the future behavior; and (3) the traces suggest that the explanation for the behavior of the person will be found in the individual and not in the situation. Traces suggest types of internal process or mechanism that produce the behavior.

Frame 2 is a summary the main features of the theories or perspectives of personality, presented by Friedman and Schustack (2004).

Frame 2. Characteristic of personality perspectives

(continue)

PERSPECTIVES	DESCRIPTION
PSYCHOANALYTIC	Observation of unconscious influences and importance of same sexual impulses in nonsexual scopes
SELF	Emphasis on <i>self</i> in their struggle to deal with emotions and impulses in the inner world and the demands of other people in the world

(conclusion)

PERSPECTIVES	DESCRIPTION
BIOLOGICAL	Focus on trends and the limits imposed by biological inheritance. It can easily be associated with most other approaches
BEHAVIORIST	More scientific analysis of learning experiences that shape personality
COGNITIVE	Focuses on the active nature of human thought and employs the knowledge of cognitive psychology
HUMANISTIC TRAIT	Objective technical evaluation of the individual, valuing the spiritual nature of people. Emphasizes the struggle for self-satisfaction
INTERACTIONIST	Recognizes the existence of different personalities in different circumstances

Source: Friedman and Schustack (2004, p. 8).

From approaches or perspectives of personality, personality traits stand out. How many traits are needed to represent human personality? This became the central question in the light of theories of personality traits (FRIEDMAN; SCHUSTACK, 2004). From the factor analysis technique, researchers have found different numbers of traces and, therefore, designs have proposed different traits. This does not suggest that there is an inherent efficiency of the factor analysis method, but rather reflects the way by which each theory chooses to evaluate the personality (SCHULTZ; SCHULTZ, 2006).

The perspective of traits suggests that people have large predispositions to respond in certain ways and that personality has a hierarchical organization (PERVIN; JOHN, 2004). The tracking theories have originated a lot of empirical research, which is the theoretical framework adopted here. In this context, McAdams and Pals (2006) share the following definition: Personality is conceived as an individual variation, expressed by developing standards, dispositional traits, adaptation characteristics, and self-definition of life, being complex and differentially located in the culture and social context.

With the development of studies of traits and personality perspectives, a measuring scale was developed, called Revised NEO Personality Inventory, which is used to measure the Top Five Personality Traits.

The model of the Top Five Personality Traits seeks to understand the personality traits from descriptors, which are terms identified in natural language,

able to represent and describe important behavioral package components observed in individuals in different societies (NUNES, 2000). They are Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism.

The Neuroticism evaluates the emotional adjustment against emotional instability. Individuals who score high on this factor are predisposed to experience anxiety, negative affect, unrealistic ideas and ways of little adaptive coping, therefore reflecting a concerned, insecure, nervous and very tense individual (SCHULTZ; SCHULTZ, 2006). On the other hand, emotionally stable individuals are calm and satisfied (FRIEDMAN; SCHUSTACK, 2004).

The Extraversion is the amount and intensity of interpersonal interaction that an individual seeks to reflect its needs and tolerance to external stimulation. Also known as "expansion," this factor contrasts expansive, energetic, enthusiastic, emotionally positive, dominant, sociable, speaker individuals, those who like to have fun, are active-oriented, with those who are withdrawn, submissive, reserved, sober, shy, and quiet. Introverts, in turn, are serious, inhibited and demonstrate a certain need for solitude. Introverts are not necessarily shy, and may even have good social skills and be free of social anxiety. Often introverts simply prefer to avoid the company of others (FRIEDMAN; SCHUSTACK, 2004; NUNES, 2000).

The Openness to Experience, also known as "culture," "imagination" or "intellect," features original, independent, inquisitive, creative, daring, imaginative, witty and artistic individuals, those who deliberately seek and enjoy new experiences, and contrasts with the more conventional ones. On the other hand, individuals with low scores on this scale are superficial, common and simple (FRIEDMAN; SCHUSTACK, 2004; COSTA; WIDIGER, 1993).

Another dimension is the Conscientiousness, also known as "lack of impulsivity." This factor is characteristic impulse control and behavior directed towards a specific goal, which may facilitate the implementation of obligations and duties. Conscientious individuals are generally cautious, trustworthy, organized, and responsible. On the other hand, individuals with low scores on this scale tend to be careless, disorderly and little-trusted (BENET-MARTINEZ; JOHN, 1998; FRIEDMAN; SCHUSTACK, 2004).

The Agreeableness is an interpersonal dimension and refers to the types of interactions that a person has over a continuum that extends compassion antagonism. People who score high in socialization tend to be generous, kind, affable, cooperative, helpful, loving, nice, and altruistic (COSTA; WIDIGER, 1993). Eager to help others, they tend to be responsive and empathetic, and believe that most of the other people will do the same. Individuals who score low in socialization tend to be cynical, uncooperative, and irritable persons and can be cold and unkind (FRIEDMAN; SCHUSTACK, 2004).

Frame 3, quoted in Pervin and John (2004) work, provides an important and didactic overview of the Top Five Personality Traits.

Frame 3. The top five personality trait factors

(continue)

Individual characteristics that presents high result	Scale of traits	Individual characteristics that presents low result
Worried, nervous, emotional, insecure, inadequate, hypochondriac.	NEUROTICISM: Rate adjustment vs. emotional instability. Identifies individuals prone to disturbances.	Quiet, relaxed, unemotional, strong, secure, self-satisfied.
Sociable, active, talkative, people-oriented, optimistic, fun, affectionate.	EXTRAVERSION: Assesses the amount and intensity of interpersonal interactions; activity level; need for stimulation and capacity for joy.	Reserved, sober, contracted, indifferent, oriented tasks, selfless, quiet.
Curious, broad interests, creative, original, imaginative, non-traditional.	OPENNESS TO EXPERIENCE: Evaluates the proactive activity and evaluation of experience in itself; tolerance and exploration of what is unfamiliar.	Conventional, sensible, limited interests, non-artistic, not analytical.

(conclusion)

Individual characteristics that presents high result	Scale of traits	Individual characteristics that presents low result
Generous, kind, confident, helpful, forgiving, trusting, honest.	AGREEBLENESS: Assesses the quality of interpersonal orientation of the individual along a continuum of compassion to antagonism in thoughts, feelings, and actions.	Cynical, rude, suspicious, non-cooperator, vengeful, unscrupulous, irritable, handler.
Organized, reliable, hardworking, self-disciplined, punctual, conscientious, clean, ambitious, persevering.	CONSCIENTIOUSNESS: Assesses the degree of organization, persistence, and motivation of the individual in behavior directed to the goals. Compares trusted people and stubborn with those who are apathetic and careless.	Without goals, unreliable, lazy, careless, negligent, relaxed, loose, hedonistic.

Source: Pervin and John (2004, p. 213).

In his studies of personality structures, Bergeret (1988) scored four points that differentiate one structure from the other: (1) nature of the internal distress; (2) type of relationship with objects (people, institutions, religions); (3) main defense mechanisms used; and (4) symptoms (in case of psychopathology).

The structures refer to the apparent behavior but also the psychological structure that leads one to this behavior. For Bergeret (1988), personality and character are used almost interchangeably. The way a person relates, defending himself/herself or adapting the way his/her needs are managed and treated, the level of internal conflict, his/her anxiety and fantasy level, form the basis of character.

According to Bergeret (1988, p. 168),

Currently most authors seem to agree about the stability and constancy of character. This constancy depend both innate ego data as factors acquired very early, then later at the level of structure, consisting of the inevitable wiring and regressions, of

which the corresponding character follow the contortions more or less archaic.

The author makes clear that the inherited factor, especially the first life experiences, ultimately structures the personality of the individual that will manifest in his/her behavior.

Bergeret (1988) lists some character types that represent latent structures, which are nothing more than behavior past progress and failures in the different stages of personality evolution:

- Conversion hysterical character: people with rich imaginary expression, strong dramatization of feelings and easily suggestible. They alternate moments of emotional proximity and withdrawal. Very expressive, but easily irritated. All emotions experienced by people with this kind of character are exaggerated. They are emotionally immature, with a lot of emotional instability;
- Hysterophobic character: people with internally and externally well-adapted relationship structures. They are very attentive to environmental events where they operate, with distress, yet lightweight. They are emotional individuals in need of virtuous opinion, what can be considered a reaction formation against sexual and aggressive desires not accepted by the superego. These individuals have much fear of punishment;
- Obsessive character: as the word says, these people strive for order, cleanliness, and organization. These individuals need to live in order, following rules, with the feeling that everything is under control. They often have awareness of crises, shyness, and inhibition and have difficulties to live their desires. They have many doubts and are insecure, often looking for isolation. They live a conflict between accomplishing their needs and fear of making these needs known to other individuals;
- Schizophrenic character: these individuals are retracted, isolated, and have large volumes of inner thoughts and feelings. They have little

affection, behave illogically. These are persons related to intellectual activities, idealistic, shy, and closed. They do not look sad or joyful;

- Paranoid character: people with agitated behavior, spiteful, claimant, vindictive and even with ideological fanaticism. People are suspicious, proud and show emotional coldness and misleading judgments. People are grouchy and do not endure frustrations. They are extremely suspicious and think they are persecuted;
- Narcissistic character: The “*me*”; those people with this type of character possess a degree of aggressiveness that is translated into action or inhibition. People with strong anxiety and loss-of-the-beloved-object feeling, which can be both significant, others, or anything to replace them. They question their ability to love and to be loved. They have controlling behavior. They have perfectionist behavior control. They always seek for attention, wanting to be the center as opposed to their thinking of not being loved and being missed.

2.4 Institutional Theory

Institutional theory (IT) is a field of research that aims to understanding the relationship between business and society. It essentially seeks to understand the reasons why companies adopt certain practices according to the external environment, whether originating within the social context in which they operate or the shares of other companies that share the same environment. It is important to note that the institutionalism is considered a reliable approach to analyzing organizations, which may explain the core values and social participants from all over the organizational field, sharing or playing power and resources to achieve their goals (FACHIN; MENDONÇA, 2003; CARVALHO; VIEIRA, 2003).

According to Meyer and Rowan (1977, p. 340),

Organizations are driven to incorporate the practices and procedures defined by concepts of streamlined organizational work prevalent and institutionalized in society. Organizations that do so increase their legitimacy and their prospects for survival, regardless of the immediate effectiveness of the acquired practices and procedures.

IT is made up of three distinct areas: economic institutionalism, political and sociological. Selznick (1949) represents the foundations of the old sociological institutionalism, having permeated the understanding of the relationship between organization and environment in organizational studies. This chain derived the sociological neo-institutionalism, which although with differences recognized in relation to the old institutionalism (DIMAGGIO; POWELL, 1983), has no inconsistency with the findings of Selznick (1996).

Greenwood et al. (2008) highlight the work of Meyer and Rowan (1977), Zucker (1977), DiMaggio and Powell (1983), Tolbert and Zucker (1983) and Meyer and Scott (1983), as those who laid the conceptual foundations of modern organizational institutionalism. The dominant theories later in the 1970s presented the organization as only responding to situational circumstances of the environment – technical environment/market – and executives (organizations) as always acting in an intentionally rational way, even under the cognitive limits of rationality. Later in the 1970s and early in the 1980s, the institutional arguments put forward were:

- Organizations are influenced by their institutional context and their institutional networks, where the institutional context consists of rationalized myths of appropriate conduct;
- Institutional pressures affect all organizations, specifically those with ambiguous and/or difficult to evaluate technologies. Organizations especially sensitive to institutional environment are institutionalized organizations;
- Organizations become isomorphic to its institutional context in order to assure social approval (legitimacy), which provides survival benefit;
- As compliance to institutional pressure may be contrary to what efficiency dictates, it can only occur dissociated from symbolic structures of the organization's technical core;
- Institutionalized practices are typically taken as given (taken-for-granted), are widely accepted, and resist changes (GREENWOOD et al., 2008, p. 6).

DiMaggio and Powell (1983) argue that IT emphasizes the structure of the action and the order established by the shared system of rules, which limit the inclination and ability to optimize the actors and privileging some groups whose interests are ensured by means of rewards and sanctions.

A central difference from the old institutionalism and that becomes crucial in the strategy studies, is the notion of environment, since, for the new institutionalism, the focus is not on the local environment (community), but includes sectors or organizational fields that are coextensive with borders of industries, professions, and nation states. For neo-institutionalists, environments are more subtle in their influence, rather than co-opted by the organizations. They penetrate the organization by creating lenses through which the actors see the world, select structural forms, and structure their thinking and action (DIMAGGIO; POWELL, 1983).

Environmental demands are operationalized by the authors by three isomorphic mechanisms, a concept that best captures the process of homogenization. Isomorphism is a limiting process that forces one unit in a population to copy other units that face the same set of environmental conditions (DIMAGGIO; POWELL, 1983). These mechanisms have already been widely discussed and may be presented as follows: (1) coercive isomorphism: results from political influence and legitimacy problem; (2) mimetic isomorphism: is the result of patterns of response to situations of uncertainty; (3) normative isomorphism: associated with professionalization.

Dacin (1997, p. 46) argues,

The institutional arena contains numerous exogenous processes that influence the structure and performance of organizations. These processes include institutional pressures that originate largely in socio-cultural norms and pressures of connections between organizations such as dependency pressures and political pressures. Institutional pressures operate in concert with other forces, such as competitive and market pressures to influence the ecological dynamics. In fact, a more complete view of organizational action reinforces the notion that organizations are inexorably immersed in a dynamic system of economic processes, institutional and ecological interrelated.

The perspective adopted by Dacin (1997) expands the analytical capability of institutional theory to improve operationalization of the environmental pressure

concept, as well as better use of the contribution of other theoretical perspectives working on the relationship between organization and environment.

Although the explanation of the persistence of forms of organization and action, through isomorphic pressures, is a dominant brand in the new institutionalism, DiMaggio and Powell (1983) have already proven the contribution to greater emphasis on the political and strategic elements of action and institutional change. Wooten and Hoffman (2008), reinforcing the argument, stress that the dominant emphasis on homogeneity was the result of an interpretation of the organizational field as predominantly static in its configuration, unitary in its constitution, and formed around technologies, industries or public networks. Upon the start of criticism to the deterministic character of the theory, the reconfiguration of the field concept began to address the notion of change. Instead of isomorphism, the notion of field returned to the idea of contested space, or "playing field" where participants or constituents engage in a war, in the distribution of specific capital, that once accumulated, guide future strategies.

In the same context, Oliver (1996) argues that the institutional theory can explain not only homogeneity and isomorphism of the firm, but also heterogeneity and variations in profitability. The institutional environment can be the cause of the inefficiency of the market and can produce relative conditions, so that organizations, through their networks, obtain different economic results to overcome failures such as those produced both by the market and the own institutional context in which exchanges occur.

2.5 Resource-Based View

The resource-based view (RBV) of the firm describes how managers identify, acquire, or build resources that may offer a competitive advantage (BARNEY, 1991). In supply chain management often this means that the manager looks both internally and externally to assemble the right combinations of resources with the emphasis on effectiveness (BARNEY, 1999).

The RBV is based on the concept that there are internal resources of the organization that lead to superior performance and gain competitive advantage, that is, one of the central points of RBV is that competitive advantage is given by

the resources and capabilities that organizations control (WERNERFELT, 1984). For that, we need to perform various interactions between resources and capacities and it is through these interactions that companies develop and sustain their competitive advantage (BARNEY, 1991; GRANT, 1991; PETERAF, 1993; PRAHALAD; HAMEL, 1990; WERNERFELT, 1984).

For Grant (1991), the more complex the interactions between resources, the harder it is for competition to destroy the competitive advantage created, since it cannot identify their sources; even if it were possible, it would hardly be reproduced.

Managers may outsource as so by assuming supplier opportunism in order to acquire valuable supplier resources (BARNEY, 1999). While RBV suggests how managers should not acquire advantageous resources, it is less clear on how they perceive or maintain them. The result is called by Teece, Pisano, and Chuen (1997) as capacity building, which for the authors is to be developed by the organizations. Therefore, the RBV was developed to evaluate the internal resources of organizations. In the dynamic supply chain, managerial perception started to be so critical to the resource management that it may guide their managerial behaviors (AZJEN, 1991).

In 1991, Barney, based on the publication of Wernerfelt (1984), released the results of their studies suggesting the existence of four required conditions for the available resources in organizations to contribute to the achievement of competitive advantages, which are: (1) valued, (2) rare (3) imperfectly imitated and (4) imperfectly replaceable. After this, others have studied how variations of these conditions alter the results of organizations (DIERICKX; COOL, 1989; PETERAF, 1993; RASCHE; WOLFRAM, 1994; BARNEY, 2002; FOSS; KNUDSEN, 2003).

Therefore, the predominant approach is the RBV that Hoskisson, Hitt, Wan and Yiu, (1999) and Wit and Meyer (2010) called "view from within the firm"; the thought became known as a reaction to the development of strategies with an emphasis on the external environment.

2.6 Agency Theory

The agency theory can be described as a tool that assists and advises how a company should work with a vendor for the benefits of using this supplier at the lowest possible risk or cost.

Jensen and Meckling (1976) define an agency relationship as a contract in which one or more individuals (principals) employ another person (the agent) to perform any service or work on their behalf, involving the delegation of authority for the agent's decision. They also say that if both parties are maximizing utility, there is a good reason to believe that the agent will not act according to the interests of the main actors. In addition, their interests do not align at all. If the targets set for the actors and agents are diverted, this will result in costs (JENSEN; MECKLING, 1976).

For Eisenhardt (1989, p. 58),

Agency theory is concerned with resolving two problems that can occur in agency relationships. The first is the agency problem that arises when (a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify what the agent is actually doing. The problem here is that the principal cannot verify that the agent has behaved appropriately. The second is the problem of risk sharing that arises when the principal and agent have different attitudes toward risk. The problem here is that the principal and the agent may prefer different actions because of the different risk preferences.

In addition, the agent is risk- and effort-averse (LEVINTHAL, 1988), so management has to figure out how to govern the relationship so that the agent does what management wants.

In Jensen and Meckling (1976) view, the Agency Theory grew out of three basic elements: (1) the principal's monitoring costs; (2) expenses related to ensure that the agent does not affect the principal with their actions and, if so, they compensate the principal; and (3) residual losses or welfare, resulting from the difference between the actual decisions of the agent and the decision that would have maximized the principal's welfare.

Figure 2. Agency theory overview

Key idea	Principal-agent relationships should reflect efficient organization of information and risk-bearing costs
Unit of analysis	Contract between principal and agent
Human assumptions	Self-interest Bounded rationality Risk aversion
Organizational assumptions	Partial goal conflict among participants Efficiency as the effectiveness criterion Information asymmetry between principal and agent
Information assumption	Information as a purchasable commodity
Contracting problems	Agency (moral hazard and adverse selection) Risk sharing
Problem domain	Relationships in which the principal and agent have partly differing goals and risk preferences (e.g., compensation, regulation, leadership, impression management, whistle-blowing, vertical integration, transfer pricing)

Source: Eisenhardt (1989, p. 59).

2.7 Transaction Costs Economics

The transaction costs economics (TCE) theory describes how to design more efficiently a given transaction, according to some characteristics and circumstances (WILLIAMSON, 1985).

The fundamental unit of analysis of this theory is the transaction, and the focus is on minimizing the efforts related to the organization of transactions (WILLIAMSON, 1996).

There are three essential characteristics or variables: frequency, uncertainty, and asset specificity of assets: (1) *frequency* refers to the shape and the amount of times that a transaction occurs. Transactions can occur only once (ceasing operations) or continuously, without a prevision for the end of the transaction among agents. Most trucking operations are between these two ends; (2) *uncertainty* refers to the ability of the company to determine contractual behaviors or results with potential suppliers. Uncertainty measures the degree of risk of the transaction and may be influenced by market conditions and inter-

organizational relationships; (3) *asset specificity* refers to the degree of repositioning of agents with investments that must be made in order to carry out the transaction. Repositioning assets is not without significant loss of value. Specificity of assets occurs when the number of suppliers and buyers is reduced. The higher the degree of asset specificity, the higher the transaction costs. Once the investment in a specific asset is made, the transaction is subject to the opportunistic behavior of the agents, which increases risks (WILLIAMSON, 1985).

TCE stems primarily from the attempt to obtain market information and the negotiation and establishment of contracts, including, in this case, monitoring costs of the agreed clauses (COASE, 1937).

The governance structure described by Williamson (1993) develops within the limits imposed by the institutional environment, the behavioral assumptions on individuals, the characteristics of transactions and contractual forms.

Williamson relies on two key assumptions for bounded rationality, which are the main reference seminal work of Simon (1954), and expediency. Under realistic assumptions, opportunistic players possessing all the information in a given time (perfect rationality) do not exist, which makes possible a transaction (or cooperation) to fail. If the agents do not have all the information, the opportunistic behavior is likely, the complexity and uncertainty of the business situation will be increasing greater, which will make difficult to take a "correct" decision. In addition to these assumptions, transaction costs are influenced by asset specificity, frequency of transactions, uncertainty, institutional environment, contractual forms, among others. However, the question being addressed here is the opportunism and bounded. Aside from that, and being a premise, opportunism and bounded rationality can pervade all conditions and situations.

The adoption of contractual forms is basically related to a particular level of specificity of the assets involved in the transactions. Williamson (1985, p. 30) defines opportunism as "search condition of self-interest with guile" and summarizes behaviors such as lying, stealing, achievements, subtle forms of cheating, disclose information in a distorted or incomplete, obscure, confuse way, etc. The author mentions also that not all people behave opportunistically all the time, but some do it occasionally.

The opportunistic behavior contributes in turn to greater complexity and uncertainty. High levels of uncertainty make preparation and implementation of contractual agreements difficult (TEECE, 1996). In trade relations or, more specifically, the cooperative relations between two (or more) companies, there are four key moments in which transaction costs may occur (WILLIAMSON, 1985):

- To go on with the cooperation, there are costs associated with searching for information on possible partners and their conditions to enter a business;
- Transaction costs, mainly intensity and duration of negotiations, contract formulation, etc.;
- Cost control to ensure that the terms of the contract are met (dates, quantities, quality, prices, business secret, intellectual property, etc.);
- Compliance costs arising from new conditions, specifically when the contract clauses are not fulfilled.

Williamson (1985) identifies two types of transaction costs that directly affect the performance of the participating economic units: (1) costs *ex ante* to negotiate and fix the compensatory measures and safeguards of the contract, and (2) costs *ex post* to monitor, renegotiate, and adapt the contractual terms to the new circumstances. These costs are present, with different intensities, according to characteristics of the transaction, either when these are mediated by the market, or when they are carried out within an enterprise.

Transaction costs *ex ante* are present, with greater intensity in those situations where it is difficult to establish the preconditions for the transaction in focus to be conducted in accordance with planned and expected parameters. The central problem is found at the transaction object definition itself, a fact that implies long and costly bargains to ensure the quality and the desired characteristics of the good or service transacted, or to avoid problems as the monetary payments.

Transaction costs *ex post* refer to the adaptation of transactions to new circumstances. According to Williamson (1985), these costs have four ways: (1) adaptation costs derived from the effects provided by the emergence of

unplanned events affecting relations between the parties involved; (2) realignment costs incurred when carrying out efforts to renegotiate and correct the performance of transactions whose characteristics have changed over the relationship between economic agents; (3) costs to assemble and maintain management structures to manage disputes that may arise in the course of the transactions; and (4) costs required to make commitments, creating guarantees with no opportunistic intentions.

2.8 Supply Chain Risk Management

There is a possibility of recouring to the market in a make-buy decision. Thus, it is required to analyze the possible risks inherent in the process, and further studying the risks in the supply chain is imperative.

Taylor (2005) defined the supply chain as a set of connected routes for transportation facilities. These installations can be classified as manufacturing facilities or storage. In a broader context, supply chains range from the activity of extraction of raw materials held in mines and farms, to the arrival of finished products to customers, which effectively utilize them for the purpose for which they are intended to.

The concept of risk has been addressed in various areas of knowledge, since this is something inherent to almost every activity of our daily lives; risk relates to the possibility that some unwanted event occurs. A definition of risk can be stipulated as "the potential for ongoing events or trends that can cause loss or fluctuations in future revenue" (MARSHALL, 2002, p. 19).

Risk management can be considered as the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the performance opportunities. The strategies to manage risk include transferring the risk to another party, avoiding the occurrence, reducing the adverse effects, and accepting some or all of the consequences of a particular event (HUBBARD, 2009).

Choi and Krause (2006) define risk in the supply chain as the possibility of an incident associated with the input suppliers in your results cause the inability

of the company to focus on meeting the demand of its consumers. So, risk is related to the emergence of negative events that prevent the company to actually meet the requirements of their client.

To understand supply chain risk management (SCRM), it is important to know what leads firms to participate in global networks and exposing themselves to the risks inherent to this type of chain. Bozarth et al. (1998) describe key factors: (1) local constraints: companies doing international business are often pressed by local governments to keep part of their production or purchase of components in these countries; (2) low price: this is the most common factor in the strategies of global supply. The search for cheaper products takes place at low and high aggregate; (3) quality: companies around the world are producing products similar to those of quality suppliers of developed countries; (4) access to technology and new markets: the search for components and materials in foreign markets brings new technologies not yet known in the countries where manufacturing is performed. The search can also occur in untapped markets, rapid development, product lifecycle, and pressure for competitive advantage.

Christopher et al. (2004) stated that every organization is exposed to risks in the supply chain and all those involved in global relationships are exposed to more uncertain and complex environments. Three factors put global supply chains at risk: the chain members participate in many other chains, the chains extend across distant regions around the globe and are affected by macroeconomic changes and policies in different countries and regions (CHRISTOPHER et al., 2011).

Khan and Burnes (2007) initially discussed the SCRM as a process that should address all risks to the past, present activities and, in particular, the future of the organization. It should be integrated into the culture of the organization with a policy and a program conducted by senior management. It should translate strategy into tactical and operational objectives, assigning responsibility throughout the organization for risk management and representing an important element of the resilience of supply chains (SHEFFI, 2005).

Risk identification proposes that all uncertainty, failures, and adverse consequences that are likely to occur in supply chains are perceived. Each company is responsible for their own risk and must identify them according to the perspective of the enterprise. In addition to these, specific risks are common to

companies that operate in the same supply chain risks. According to Shi (2004), the effective identification of risks in the supply chain can be achieved through brainstorming, process mapping, historical analysis, and literature review. Risk analysis is the stage of the SCRM process that consists in determining the likelihood and impact of risks that will be examined.

The risk analysis provides the foundation for the steps of evaluation and treatment of risks and involves a thorough examination of the sources of risk, the survey's probabilities, and consequences, the factors that affect the results, and the estimation of some existing process or control that may minimize risks. The assessment proposes that the most appropriate management response for managing each of the risks identified is decided. Chopra and Sodhi (2004) said that it should combine a shared throughout the organization on risk and its consequences for supply chains understanding. Numerous strategies can be used. These include: transfer, mitigate, prevent, and accept the risks. The prioritization of risks is the process of identifying the relevant risks within the universe of risks that may affect supply chains (SHI, 2004). For Zsidisin et al. (2004), continuous monitoring and review of information on the risks may allow the development of contingency plans as the risk increases. Still, according to the author, together with the obligation to manage risk more effectively is the use of metrics associated with risk and performance.

Therefore, managing risks in the supply chain has become an important activity for most organizations, tending to increase its importance due to the increasing globalization of supply chains (KHAN; BURNES, 2007).

2.9 Constructs

2.9.1 Locus of Control

Control is the ability to alter perceived events significantly. This means that it is not necessary that people actually exercise control over the relevant events, but that they realize that control. The perception of control is the primary determinant of the subject's response (BURGER, 1989).

Locus of Control (LOC) is the way by which each individual gives him/herself control over the events that occur in his/her life; a personality variable that expresses individual expectations that rewards results and assignments are

controlled or sources other than the individual or internal sources (him/herself). LOC is how a person perceives and attaches to the relationship between their efforts and the outcome of a particular event. When this relationship is clear to the individual, it is considered internally oriented, on the other hand, external factors both stop success as to the failure of certain actions, such as luck, fate, and chance (ROTTER, 1966; SPECTOR, 1988; WENZEL, 1993). Another complementary definition of Góngora (1998) brings the LOC as generalized expectations about the origin of rewards and punishments in the world.

In a later work, Rotter (1990) returned the concept by defining more simply the difference between internal and external sources. The internal LOC refers to the perception of the individual's control over the outcome of the action and, therefore, the individual tends to perceive himself as a result of his own action. The external LOC refers to the perceived lack of individual control over the action or that the result does not depend on their own behavior. In this sense, there is a tendency that the individual perceives it as a consequence of external factors.

Some studies of the externality-internality have been acknowledged on numerous application areas. An example is the work on the relationship between healthy LOC and the implementation of health-related behaviors (BENNET et al., 1997). Part of this research has reflected a positive relationship between the scores on the internal dimension and behaviors that promote health and an adverse relationship between the scores of luck dimension and healthy or positive behaviors.

Also, consumer psychology has investigated the orientation control that individuals have, showing that consumers with inner guidance rely on their own knowledge to evaluate new products. Consumers with external orientation depend on the advice of outsiders to guide them in choosing a product (SCHIFFMAN; KANUK, 1997).

Lefcourt (1991) and Rotter (1966) reported that individuals with internal LOC are dependent on information related to its future behavior aimed at increasing their environmental conditions, meeting skills and success skills on the long-term, are more concerned for their failures or errors, are more resistant to foreign manipulation and have more intentional learning, high level of academic performance and more positive activities of success. That is, individuals with internal LOC are more aware on aspects of their environment providing

information relevant to them for their future conduct and make more efforts to improve their situation. The internality is associated with higher rates of adaptation, satisfaction, and involvement in the activities of the externality. In addition, the "internal" individuals have more motivation for success than the external ones (SÁNCHEZ, 1990).

One aspect associated with the external LOC that should not be excluded is the learning process inability that occurs when the subject identifies its lack of control over certain everyday situations, gives control to external forces and is depressed. It is assumed that the greater lack of control causes more external attribution and consequently major depression.

Levenson (1973, 1974, 1981) postulated three dimensions at LOC: (1) personal dimension: the control source is the individual himself; (2) social dimension: the control source is represented by other powers; (3) impersonal dimension: source control is the luck, chance, or fate.

2.9.2 Bandwagon Pressure for Outsourcing

We can bring the concept of irrationality of markets to illustrate a concept called "Bandwagon Effect," also known as "Bandwagon Pressure." The rises and falls in the stock markets are not rational, but rather a result of the Bandwagon Effect. When an investor starts to sell or buy shares of a particular company, the trend is that others will follow, also performing the same operations. This behavior occasionally leads to instability in the market, as it affects the industry dynamics (SACHSIDA, 2009).

Bandwagon effect is a process of dissemination of information from organizations that adopt innovations – most of the time without the use of any rational assessment of these innovations – due to external pressure promoted by the large number of organizations that have adopted or are considering adopting this new technology (TOBERT; ZUCKER, 1983; REINGANTUM, 1981).

A manager who takes the same decision as its competitor believes he/she is making the right decision because it has already been "endorsed" by their peers (CIALDINI; GOLDSTEIN, 2004). Anderson (2015, p. 23) gives us an example of this behavior, "...when industry out-look is optimistic, both firms invest

ahead of demand (i.e., capacity expansion bandwagon behavior), but if industry out-look is more pessimistic, both firms invest after demand has occurred.”

This pressure can encourage managers to rationalize their decision to outsource to stay close to or compete with other organizations that are outsourcing at that moment. This rationalization can be generated by institutional power, mimics or by the rules of the organization (DIMAGGIO; POWELL, 1983).

Managers hardly have the correct information about for what reasons a competitor decides to outsource. Usually managers only have public information about outsourcing decisions without the details of the negotiation and the deal that was done. Thus, when faced with a situation where they must take a similar decision, they feel pressured by the decisions of its competitors and must make the decision to outsource (HALL, 2012).

2.9.3 Monitoring Practices (Internal & External)

The monitoring of internal processes and suppliers is done by establishing appropriate rules and measures to track the performance of a particular stock in order to report directly to managers involved in the analyzed situations (BOWERSOX et al., 2007).

Within the monitoring perspective, contract management is a powerful, but very complex tool, which is often aggravated by high business activity costs, implementation and monitoring of contractual actions, establishing a precise relationship between the costs and benefits of needed contractual objects (BROWN et al., 2003).

According to FNQ (2006, p. 18), decision-making at all levels of the organization,

...must be based on the analysis of facts, data and information from internal and external environments, covering all stakeholders. Measurements should reflect the needs and strategies of the organization and provide reliable information on processes and outcomes.

To give effect to the decision-making process, the organization must have structured information systems appropriate to its activities and develop ways of obtaining and systematic use of comparative information.

Thus, Wright et al. (2000) suggest some steps to be followed by the senior management: (1) deciding which parts of the environment and the organization should be monitored, evaluated, and controlled; (2) setting standards to which to compare actual performance of the organization; (3) measuring or assessing the true performance of the company, comparing it to previously established standards; (4) taking corrective action if the performance is not in accordance with established standards.

Wright et al. (2000, p. 339-344) further add that senior management must align advantageously the internal operations of the company to its external environment. "Strategic control can be viewed as a" mediator "of interactions between environmental variables and the internal dimensions of the company." This control should consider the macro-environment, the industry environment, mission and goals and objectives of the company, the formulation, and implementation of strategies and their qualitative and quantitative results.

Regarding the strategic control, Wright et al. (2000) point out that it can be exercised in several ways to ensure that the organization has a performance agreement with its mission, general and specific objectives. The authors highlight the following ways: (1) control through multilevel performance criteria: this form of control involves performance standards for individuals, functions, products, divisions or strategic business units; (2) control through the performance: this can occur by monitoring financial indicators, including, return on investment, profitability, stock price, etc. These indicators can be compared with others in the industry; (3) by means of organizational control variables: in this case, the control can be done by formal or informal organization. In the formal organization, the clear communication of the organization's values and the determination of a reward system that is consistent with these values and informal organization, the control is the result of personal interactions that develop between individuals and groups placed with each other, that is, proper behavior of the administrators.

Purdy and Safayene (2000) argue that suppliers can conduct mock audits to ensure that everyone has the same condition of being evaluated, thereby increasing the likelihood of a positive assessment.

Another type of product evaluation comes from the market in the form of consumer complaints and cost of warranty on various aspects of customers' products. This kind of indirect information can be used in assessing suppliers and

in demanding corrective actions on the part of the supplier (PURDY; SAFAYENE, 2000).

2.9.4 Cost and Quality Dynamics

Cost is all spent feature in the production of a good or service. For Martins (2001, p. 25), cost is spent on goods or services used in the production of other goods or services. As defined by Maher (2001), cost is a sacrificial feature. In this context, sacrifice is an immediate disbursement or future promise of payment.

Today, cost of non-quality threatens organizations, and, therefore, they shall have a financial control over these costs with the same rigor applied to takeover materials. Even renowned companies known for their excellence, both in terms of products and services, may lose capital not to take advantage of important opportunities to minimize their costs, especially indirect costs (OSTRENGA, 1993; HARRINGTON, 1992).

One of the fundamental goals for identifying quality costs is to measure the size of the quality problem in a striking language of upper management, namely: a financial approach. This approach can improve communication at the senior management and middle management hierarchical levels (JURAN, 1991).

In most industries, the markets are competing on a global scale by offering goods and services with quality and low costs. Improve efficiency and restructuring costs of systems became common goals to all organizations (OSTRENGA, 1993).

Brickley et al. (2004) analyze some factors that make up the cost of market transactions, as those are the ones that link the organization to its suppliers, more than the cost of the transactions that occur within organizational boundaries:

(A) Specific assets to the firm development need: "assets that are substantially more valuable in its current use than its next best alternative use of specific assets are called the firm" (BRICKLEY et al., 2004, p. 522).

According to Williamson (1985), there are four most common types of specific assets: (1) Plant specificity: the asset cannot be transported easily and the fact of being located in a particular area makes it useful only for a certain amount of suppliers and buyers; (2) specificity of the physical asset: the asset has physical characteristics that make it useful only for some buyers; (3)

specificity of human assets: the transaction between supplier and buyer needs expertise to make it happen; (4) dedicated assets: plants expansion is required to meet only a small amount of buyers.

(B) The need to ensure quality: when the quality of an input is essential to the success of a product, the organization incurs costs to perform activities such as: (1) development of contracts containing adequate incentives for the supplier to guarantee quality; and (2) monitoring of suppliers.

(C) The need to reduce impacts of individual decisions within the supply chain: the organization may find it difficult to motivate their partners, such as suppliers, to invest sufficient resources to maintain the reputation of its products and services and consumer loyalty. If a supplier, for example, reduces its cost at the expense of quality delivered, it will absorb any financial benefit, but will pay only part of the burden of having provided a service or poor quality product to the final consumer, since the damage would be allocated to the buying organization. To avoid this, the organization will have costs when designing appropriate incentives, portray them in contracts and monitor the delivered quality. Along these lines, another aspect that generates expenditure of effort and resources is the coordination of decisions within the supply chain, formed by independent companies.

Williamson (1985) and North (1990) emphasize that, in market transactions, there are costs associated with: (1) search: gathering information to identify and evaluate potential partners business; (2) hiring: negotiation and drafting of agreement or contract; (3) monitoring: monitoring the agreement to ensure that the parties comply with the commitment made between them; (4) judicial execution of the contract: penalty for a breach of agreement.

Degraeve and Roodhooft (2001) argue that the purchase price of goods and services is only part of the total cost of obtaining these inputs, with few executives who know precisely the magnitude of the costs involved with buying and where they occur. Degraeve and Roodhooft (2001) also show costs at the order level and the product unit, which are related to the management of the supply chain.

Another key issue when analyzing cost and quality refers to environmental dynamism issues where firms are located. The considered high speed environments, as described by Bourgeois and Eisenhardt (1988, p. 816), are

"those in which there is rapid and discontinuous change in demand, competitors, technology, and/or regulations such that information is often do inaccurate, unavailable, or obsolete." In this context, issues related to the opportunism of the agents, described by the TCE, may cause increase/decrease of costs (buyer/supplier) or the need to increase/decrease quality compliance rapidly.

If a company has chosen low cost as a priority, this is indicated by the emphasis placed on reducing unit costs, material and overhead costs, or inventory reduction. We measure a manufacturing quality priority by degree of emphasis on activities to reduce defect rates, improve vendor quality, improve product performance and reliability, or activities related to achieving an international quality standard (WARD et al., 1995).

2.9.5 Perception of Cost and Quality Mandate

Perception is considered an interpretative process operating upon sensory data (PENNA, 1968). The same author argues that perceptual processes mobilize past experiences, enriching data collected by sensory processes, organization and giving them meaning.

Knowledge is not only obtained by evaluation of our own results, but also by the way of how we are perceived and judged within the social groups to which we are connected, whether at work or in private life (PENNA, 1968).

The perception of cost and quality tends to be different for some approaches. The individual may have their own views on cost and quality (internal LOC) and can withstand external influences that make him realize differently (external LOC and Bandwagon Effect).

Institutional theory can also explain some issues related to pressure for cost and quality. Most of the time, these concepts are institutionalized and are at the root of organizations. Then, there is the pressure to achieve a certain level of cost and quality.

Beer (1997, p. 49) says, "pressures for cost reduction not only demand a different corporate organization, they place pressure on the human resource function to be cost effective."

The search for lower costs and higher quality is a demand generated by customers and is a source of competitive advantage in the market (BARNEY,

2002). When taking decisions, managers will always seek for something that can reduce costs and increase quality (HALL, 2012).

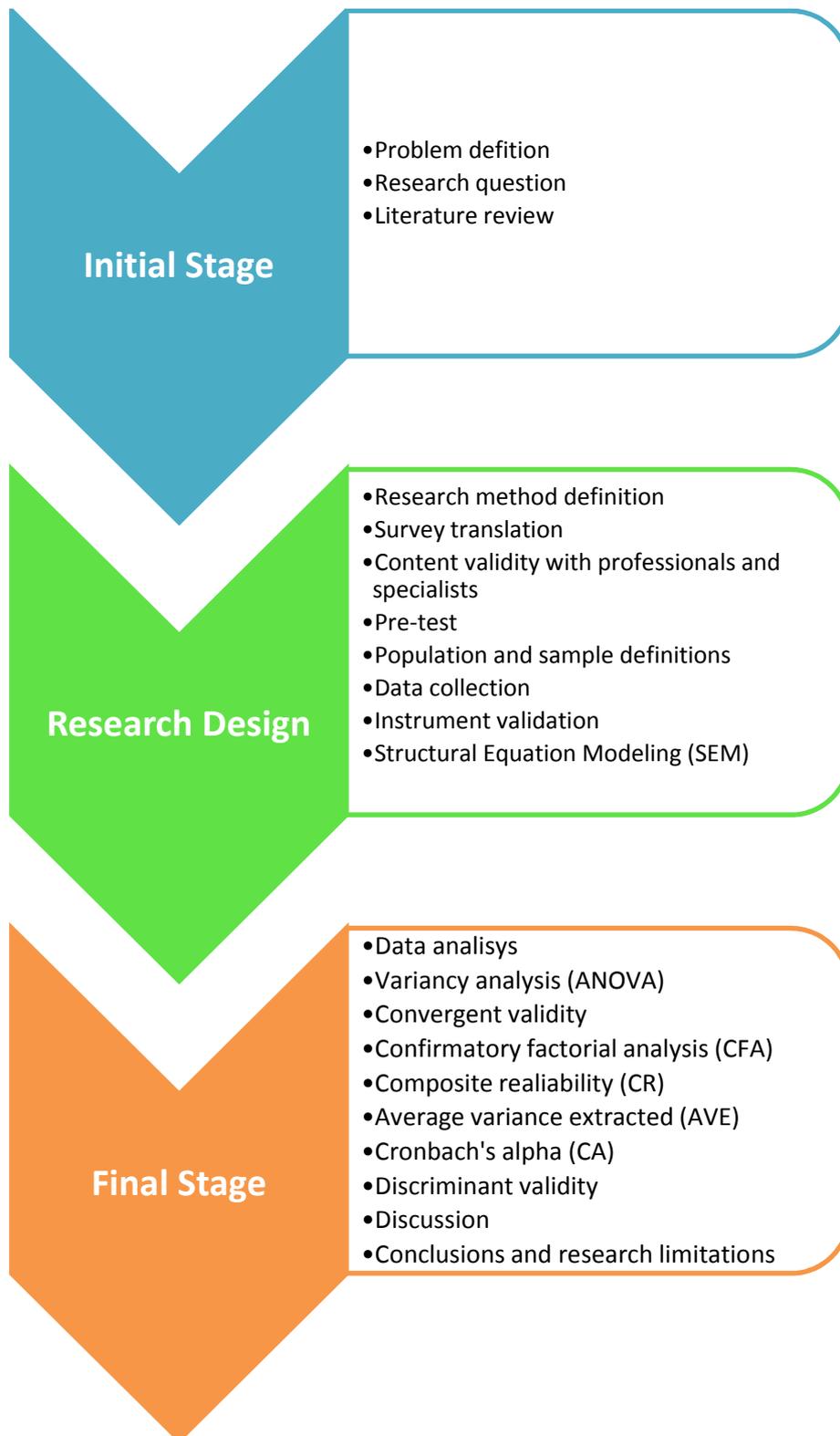
Quality of products, services, process or suppliers is been constantly desired for all companies, and the importance each manager gives to this factor will influence on how much this variable may induce the decision-making process on the issue of outsourcing. According to Gray et al. (2009), quality has a strong impact on decision makers, since they tend to feel more comfortable to adopt strategies that bring quality results.

The cost analysis essentially compares manufacturing costs of a particular component with the cost of getting it on the market. Thus, it is acceptable to say that the most obvious reason to search abroad is the intention to reduce cost, because managers' goal is to found a sourcing solution, which keeps the lowest total price (BUTTER; LINSE, 2008)

3 RESEARCH DESIGN

In this chapter, will be detailed the research design, since the selected approach, through data collection and analysis technique. The basic framework for this research is described in figure 3.

Figure 3. Research design



Source: Elaborated by the author.

3.1 Method

The approach to be used for this research is quantitative. A survey questionnaire was applied, which according to Creswell (2010), is a numerical representation of trends, opinions or attitudes of a given population, studied through a sample that could lead to a generalization of the results. Also according to Creswell (2010, p. 177), "the reduction to a parsimonious set of variables, tightly controlled by planning or by statistical analysis provides measurements or observations for the testing of a theory." Hair et al. (2005) define survey as a procedure for collecting primary data from a large sample of individuals, where the data to be collected may vary between beliefs, opinions, attitudes and personal experience.

This study has used a composite questionnaire of 75 questions as a research tool. A questionnaire is an appropriate instrument to obtain data, regardless of the type of research (quantitative or qualitative), consisting of structured questions, previously formulated and arranged in a predetermined order, with blank spaces suitable for recording responses. The questionnaires used in surveys are generally designed to give a large amount of data and responses are limited to a predetermined number. They can be personally delivered to the research subjects or sent by mail or over the Internet to be answered. The questionnaire can include only open or closed questions (with fixed alternatives, multiple choice or scale) or combine parts of each type of formulation (CHAROUX, 2004; HAIR et al., 2005).

The questionnaire will use the five-point Likert's scale as a response option for construct's measurement. There are two types of scale questions. The first one is represented by "1-Strongly disagree," "2-Disagree," "3-Neither," "4-Agree" and "5-Strongly Agree." The second one is represented by "1-Almost never," "2-Infrequently," "3-Occasionally," "4-Frequently," and "5-Almost always."

Likert's scale is an interval psychometric scale that employs questionnaires in which respondents specify their agreement in relation to a statement. This type of scale uses numbers in the form of labeling regulations to classify objects and events and the distance between the numbers is equal (LIKERT, 1932; HAIR et al., 2005).

The questionnaire was developed by Professor David Caleb Hall, from Wright State University in the United States. The entire instrument was discussed and altered during the conception of this work. The questions are divided into five

main constructs: locus of control, monitoring practices, cost and quality dynamics, cost and quality mandate and bandwagon pressure for outsource.

3.1.1 Locus of control questions

The locus of control construct is the degree to which an individual believes that he/she influences the outcomes of events in their lives (internal) as opposed to the influence of forces such as chance or fate (external). The questions of this construct are listed in frame 4.

Frame 4. Locus of control survey questions

(continue)

LOCUS OF CONTROL QUESTIONS
AUTHORS: Bennet et al. (1997); Burger (1989); Góngora (1998); Lefcourt (1991); Levenson (1973, 1974, 1981); Rotter (1966, 1990); Sánchez (1990); Schiffman and Kanuk (1997); Spector (1988); Wenzel (1993).
58. When I make plans, I am almost certain that I can make them work. Translation: Quando faço planos, estou quase certo de que posso fazê-los funcionar.
59. Getting people to do the right things depends upon my ability; luck has nothing to do with it. Translation: Levar as pessoas a fazer as coisas certas depende da minha capacidade; sorte não tem nada a ver com isso.
60. What happens to me is my own doing. Translation: O que acontece comigo é de minha responsabilidade.
61. I complete tasks successfully. Translation: Concluo tarefas com êxito.
62. I handle tasks smoothly. Translation: Conduzo tarefas sem problemas.
63. I come up with good solutions. Translation: Eu proponho boas soluções.
64. I prefer a job where I have a lot of control over what I do and when I do it. Translation: Prefiro um trabalho onde tenho grande controle sobre o que eu faço e quando faço.
65. I prefer to be a leader rather than a follower. Translation: Prefiro ser um líder a um liderado.

(conclusion)

LOCUS OF CONTROL QUESTIONS

AUTHORS: Bennet et al. (1997); Burger (1989); Góngora (1998); Lefcourt (1991); Levenson (1973, 1974, 1981); Rotter (1966, 1990); Sánchez (1990); Schiffman and Kanuk (1997); Spector (1988); Wenzel (1993).

66. I enjoy having control over my own destiny.

Translation: Eu gosto de ter controle sobre meu próprio destino.

Source: Elaborated by the author.

3.1.2 Monitoring practices questions

The monitoring practices construct is the supplier performance management systems consist of practices used to evaluate supplier cost or quality performance. The monitoring practices construct is formed by many variables and could be broken into sub-constructs. However, due to exploratory nature of this study, it was recommended by Professor Hall to maintain the original structure, which may be changed in future studies. The questions of this construct are listed in frame 5.

Frame 5. **Monitoring practices** survey questions.

(continue)

MONITORING PRACTICES QUESTIONS

AUTHORS: Bowersox (2007); Brown (2003); FNQ (2006); Purdy and Safayene (2000); Wrigth et al. (2000).

7. How frequently does your organization use customer complaints to help identify supplier cost issues?

Translation: Com que frequência sua organização utiliza as reclamações dos clientes como ajuda para identificar problemas de custos dos fornecedores?

8. Customer complaints are an inexpensive way to identify supplier cost issues.

Translation: As reclamações dos clientes são uma forma barata de identificar problemas de custos dos fornecedores.

9. Customer complaints are an effective way to identify supplier cost issues.

Translation: As reclamações dos clientes são uma forma efetiva de identificar problemas de custos dos fornecedores.

10. How frequently does your organization use customer surveys to help identify supplier cost issues?

Translation: Com que frequência sua organização utiliza pesquisas de satisfação de consumidor para identificar problemas de custos de fornecedor?

(continue)

MONITORING PRACTICES QUESTIONS

AUTHORS: Bowersox (2007); Brown (2003); FNQ (2006); Purdy and Safayene (2000); Wrigth et al. (2000).

11. Customer surveys are an inexpensive way to identify supplier cost issues.

Translation: Pesquisas de satisfação de consumidor são formas baratas de identificar problemas de custos de fornecedor.

12. Customer surveys are an effective way to identify supplier cost issues.

Translation: Pesquisas de satisfação de consumidor são formas efetivas de identificar problemas de custos com fornecedores.

13. How frequently does your organization use supplier off-site audits to help identify supplier cost issues?

Translation: Com que frequência sua organização utiliza auditorias externas para identificar problemas de custos com fornecedores?

14. Supplier off-site audits are an inexpensive way to identify supplier cost issues.

Translation: Auditoria externa é uma forma barata de identificar problemas de custos com fornecedores.

15. Supplier off-site audits are an effective way to identify supplier cost issues.

Translation: Auditoria externa de fornecedores é uma forma efetiva de identificar problemas nos custos dos fornecedores.

16. How frequently does your organization use supplier on-site audits to help identify supplier cost issues?

Translation: Com que frequência sua organização usa a auditoria interna dos fornecedores para ajudar a identificar problemas com custos de fornecedores?

17. Supplier on-site audits are an inexpensive way to identify supplier cost issues.

Translation: Auditoria interna de fornecedores é uma forma barata de identificar problemas com custo dos fornecedores.

18. Supplier on-site audits are an effective way to identify supplier cost issues.

Translation: Auditoria interna de fornecedores é uma forma eficiente de identificar problemas com custo dos fornecedores.

19. How frequently does your organization use supplier incentives (e.g., cost or profit sharing) to help identify supplier cost issues?

Translation: Com que frequência sua organização utiliza incentivos aos fornecedores (Ex. Divisão de lucros e custos) identificar problemas com custo dos fornecedores?

20. Supplier incentives (e.g., cost or profit sharing) are an inexpensive way to identify supplier cost issues.

Translation: Incentivos aos fornecedores (Ex. Divisão de lucros e custos) são uma forma barata de identificar problemas com custo dos fornecedores

21. Supplier incentives (e.g., cost or profit sharing) are an effective way to identify supplier cost issues.

Translation: Incentivos aos fornecedores (Ex. Divisão de lucros e custos) são uma forma eficiente de identificar problemas com custo dos fornecedores

28. How frequently does your organization use customer complaints to help identify supplier conformance quality issues?

Translation: Com que frequência sua organização utiliza as reclamações dos clientes para identificar problemas de qualidade dos seus fornecedores?

29. Customer complaints are an inexpensive way to identify supplier conformance quality issues. Translation: As reclamações dos clientes são uma forma barata de identificar problemas de conformidade da qualidade dos fornecedores.

(continue)

MONITORING PRACTICES QUESTIONS

AUTHORS: Bowersox (2007); Brown (2003); FNQ (2006); Purdy and Safayene (2000); Wrigth et al. (2000).

30. Customer complaints are an effective way to identify supplier conformance quality issues.

Translation: As reclamações dos clientes são eficientes para identificar problemas de conformidade da qualidade dos fornecedores.

31. How frequently does your organization use customer surveys to help identify supplier conformance quality issues?

Translation: Com que frequência sua organização usa pesquisa de consumidores para auxiliar na identificação de problemas de conformidade da qualidade dos fornecedores?

32. Customer surveys are an inexpensive way to identify supplier conformance quality issues.

Translation: Pesquisa de consumidores são uma forma barata de identificar problemas de conformidade da qualidade dos fornecedores.

33. Customer surveys are an effective way to identify supplier conformance quality issues.

Translation: Pesquisa de consumidores são uma forma eficiente de identificar problemas de conformidade da qualidade dos fornecedores.

34. How frequently does your organization use supplier off-site audits to help identify supplier conformance quality issues?

Translation: Com que frequência sua organização usa auditorias externas para ajudar na identificação de problemas de conformidade da qualidade dos fornecedores?

35. Supplier off-site audits are an inexpensive way to identify supplier conformance quality issues.

Translation: Auditoria externa dos fornecedores é uma forma barata de identificar problemas de conformidade da qualidade do fornecedor?

36. Supplier off-site audits are an effective way to identify supplier conformance quality issues.

Translation: Auditoria externa dos fornecedores é uma forma eficiente de identificar problemas de conformidade da qualidade do fornecedor?

37. How frequently does your organization use supplier on-site audits to help identify supplier conformance quality issues?

Translation: Com que frequência sua organização usa auditorias internas para ajudar na identificação de problemas de conformidade da qualidade dos fornecedores?

38. Supplier on-site audits are an inexpensive way to identify supplier conformance quality issues.

Translation: Auditoria interna dos fornecedores é uma forma barata de identificar problemas de conformidade da qualidade do fornecedor?

39. Supplier on-site audits are an effective way to identify supplier conformance quality issues.

Translation: Auditoria interna dos fornecedores é uma forma eficiente de identificar problemas de conformidade da qualidade do fornecedor?

40. How frequently does your organization use supplier incentives (e.g., pay-for-performance or supplier chargebacks) to help identify supplier conformance quality issues?

Translation: Com que frequência sua organização usa incentivos dos fornecedores (Ex. pagamento por desempenho/reembolso dos fornecedores) para identificar problemas de conformidade da qualidade do fornecedor?

(conclusion)

MONITORING PRACTICES QUESTIONS

AUTHORS: Bowersox (2007); Brown (2003); FNQ (2006); Purdy and Safayene (2000); Wrigth et al. (2000).

41. Supplier incentives (e.g., pay-for-performance or supplier chargebacks) are an inexpensive way to identify supplier conformance quality issues.

Translation: Incentivos dos fornecedores (Ex. pagamento por desempenho/reembolso dos fornecedores) são uma forma barata de identificar problemas de conformidade da qualidade do fornecedor?

42. Supplier incentives (e.g., pay-for-performance or supplier chargebacks) are an effective way to identify supplier conformance quality issues.

Translation: Incentivos dos fornecedores (Ex. pagar por desempenho/ reembolso dos fornecedores) são uma forma eficiente de identificar problemas de conformidade da qualidade do fornecedor?

Source: Elaborated by the author

3.1.3 Bandwagon pressure for outsourcing questions

The bandwagon pressure for outsourcing is the pressure that the competitors exerts on the decision maker to conform to he perceived peer group's norm (ASCH, 1955). If everybody else is outsourcing, the manager may alter his beliefs to outsource too. The questions about this construct are presented in frame 6.

Frame 6. **Bandwagon pressure for outsource** survey questions.

(continue)

BANDWAGON PRESSURE FOR OUTSOURCE QUESTIONS

AUTHORS: Anderson (2015); Cialdini and Goldstein (2004); DiMaggio and Powell (1983); Hall (2012); Reingantum (1981); Sachsida (2009); Tobert and Zucker (1983).

43. The outsourcing decisions of your competitors are optimal.

Translation: As decisões de terceirização de seus concorrentes são consideradas ideais.

44. In your industry the majority of firms' outsourcing decisions are optimal.

Translation: Em seu ramo de negócios a maioria das decisões de terceirização são ideais.

45. Managers feel less responsible for their choice to outsource because competitors are outsourcing.

Translation: Gerentes sentem-se menos responsáveis pela decisão de terceirizar pois seus concorrentes estão terceirizando.

(conclusion)

BANDWAGON PRESSURE FOR OUTSOURCE QUESTIONS

AUTHORS: Anderson (2015); Cialdini and Goldstein (2004); DiMaggio and Powell (1983); Hall (2012); Reingantum (1981); Sachsida (2009); Tobert and Zucker (1983).

46. Competitors' decisions to outsource compel managers to outsource contrary to their personal opinion.

Translation: A decisão dos concorrentes em terceirizar induz gerentes a terceirizar contrariando sua opinião pessoal.

47. Managers may be encouraged to outsource because of the unspoken rules and standards of their organizations.

Translation: Gerentes podem se sentir encorajados a terceirizar devido a regras e padrões organizacionais não declarados.

48. Managers feel that their competitors' outsourcing provides evidence that outsourcing is the 'right' thing to do.

Translation: Gerentes sentem que o fato de seus concorrentes terceirizarem fornece evidências de que é o correto a fazer.

49. Managers outsource because outsourcing is the norm in their profession.

Translation: Gerentes terceirizam porque terceirizar é a norma em sua profissão.

50. Managers feel threatened or intimidated into outsourcing.

Translation: Os gerentes se sentem pressionados ou intimidados a terceirizar.

51. Managers feel outsourcing is a standard response to environmental uncertainty.

Translation: Os gerentes acreditam que a terceirização é a resposta ideal para as incertezas do ambiente.

52. Managers believe outsourcing reduces the risk of negative personal consequences is reduced.

Translation: Os gerentes acreditam que a terceirização reduz os riscos de consequências pessoais negativas.

53. Managers believe the benefit from outsourcing increases as more competitors outsource.

Translation: Os gerentes acreditam que os benefícios da terceirização aumentam à medida que mais concorrentes terceirizam.

54. Managers believe the benefit from internal production decreases as more competitors outsource.

Translation: Os gestores acreditam que os benefícios de produzir internamente diminuem à medida que mais concorrentes terceirizam.

55. Managers believe that competitors are outsourcing optimally and are better informed about outsourcing.

Translation: Os gestores acreditam que os concorrentes estão terceirizando de forma otimizada e estão mais bem informados sobre a terceirização.

56. Managers outsource to pursue low costs.

Translation: Gerentes terceirizam para procurar baixos custos.

57. Managers outsource to pursue high conformance quality.

Translation: Gerentes terceirizam para procurar altos padrões de qualidade.

Source: Elaborated by the author.

3.1.4 Cost and quality dynamics questions

The next survey's construct is Cost and Quality Dynamics. Dynamics of supplier costs is defined as the pattern of change associated with supplier costs over-time. Dynamics of supplier quality is defined as the pattern of change associated with supplier quality over-time. The questions of this construct are described in frame 7.

Frame 7. **Cost and quality dynamics** survey questions.

COST AND QUALITY DYNAMICS QUESTIONS	
AUTHORS: Brickley et al. (2004); Degraeve and Roodhooft (2001); Harrington (1992); Hennant (1993); Juran (1991); North (1990); Ostrenga (1993); Williamson (1985).	
4. Supplier costs do not change.	Translation: Custos com fornecedor nunca mudam.
5. Supplier costs decrease over-time.	Translation: Os custos com fornecedor diminuem com o passar do tempo.
6. Supplier costs increase over-time.	Translation: Os custos com fornecedor aumentam com o passar do tempo.
25. Supplier conformance quality does not change.	Translation: Os padrões de qualidade do fornecedor não mudam.
26. Supplier conformance quality decreases over-time.	Translation: Os padrões de qualidade do fornecedor diminuem ao longo do tempo.
27. Supplier conformance quality increases over-time.	Translation: Os padrões de qualidade do fornecedor aumentam ao longo do tempo.

Source: Elaborated by the author.

3.1.5 Perception of cost and quality mandate questions

A cost mandate is the emphasis, expectation, or pressure from your organization to lower costs or meet cost objectives. A quality mandate is from your organization to increase costs or meet quality objectives. The questions about cost and quality mandate construct are presented in Frame 8.

Frame 8. Perception of cost and quality mandate survey questions.

COST AND QUALITY MANDATE QUESTIONS
AUTHORS: Barney (2002); Butter and Linse (2008); Gray et al. (2009), Hall (2012); Horn et al. (2014); Penna (1968)
1. I am expected to procure lower costs. Translation: A empresa espera que eu procure os menores custos.
2. I feel pressure to procure lower costs. Translation: Me sinto pressionado a buscar os menores custos.
3. My boss(es) emphasizes cost objectives. Translation: Meu(s) superior(s) determina(m) o custo como objetivo.
22. I am expected to procure higher conformance quality. Translation: A empresa espera que eu procure por padrões de qualidade mais altos.
23. I feel pressure to procure higher conformance quality. Translation: Me sinto pressionado a procurar por padrões de qualidade mais altos.
24. My boss(es) emphasizes conformance quality objectives. Translation: Meu chefe enfatiza objetivos baseados em padrões de qualidade.

Source: Elaborated by the author

3.1.6 Instrumental variables questions

Instrumental variables provide a way to obtain consistent parameter estimates. Its primary function is to verify if a participant's answers are correct.

Frame 9. Instrumental variables survey questions

INSTRUMENTAL VARIABLES QUESTIONS
AUTHORS: Burger and Cooper (1979); Malhotra (2006)
67. When you must choose between the two, you dress for fashion, not for comfort. Translation: Quando tiver que escolher entre os dois, você preza a moda, e não o conforto.
68. Please indicate your level of experience in decision-making. Translation: Por favor indique seu nível de experiência em processos de decisão.

Source: Elaborated by the author.

3.2 Questionnaire Translation into Portuguese

As previously reported, the questionnaire used was developed by Professor Ph.D. David Caleb Hall of the Wright State University in the United States. The entire instrument was developed in English language, as can be seen in Appendix A of this work.

For this instrument to be tested with the Brazilian public, it was necessary to translate its contents into Brazilian Portuguese. The instrument survey was translated and sent to a professional for translation validation. The professional whose instrument was sent is called Marina Moya, graduated in Arts with emphasis to English and Portuguese Language at University of São Paulo (USP). The translator has over 25 years of experience in the area and works for large companies such as Canon, Xerox, Microsoft, Dell, among others, providing text translation services, manuals, and promotional materials.

The translator was aware of the objectives and concepts underlying the study and sought to detect the ambiguities and unexpected meanings in the original items.

The instrument returned 15 days following submission with some corrections and words change suggested. All were met. The next step was to make reverse translation into English. The instrument was sent to two English teachers to translate into Portuguese. Upon receiving back the reverse translations, it was compared with the translation performed by the translator Marina Moya and it was found that the structure and understanding of the issues were identical. The instrument with the final translation can be viewed in Appendix B of this work.

3.3 Content Validity

The content validation involves the evaluation of a scale capable of measuring what is being proposed (HAIR et al., 2009). For this work, two stages of content validation to perform the analysis of the survey instrument were followed, with the purpose to determine whether the instrument created could assess what has been proposed. In addition, it sought to evaluate possible adjustments and corrections in the instrument before its application to

businesses.

For content validation data, the survey instrument was submitted to evaluation of teachers, researchers, and executives in the supply chain and logistics management. The aim in both cases was to ascertain the views of these experts about the instrument's ability to meet what has been proposed, and teachers and executives were asked to provide criticism and suggestions for improvement.

The questionnaire was sent by e-mail to 20 people, including five academic expert teachers in logistics and supply chain, all with over 10-year experience in the area, and 15 professionals, all executives of a multinational company with more than 5-year experience in supply-chain, logistics and transportation areas. This assessment allowed for understanding the perception of experts on the instrument issues and allowed changes and corrections to be made before main data collection.

The e-mail sent out can be viewed in Appendix C of this study.

Some suggested changes of the issues by some professionals were received. The professionals and consulted teachers, found the survey too long, with an excessive number of issues.

After a long round of discussions with Prof. Hall, who developed the survey, it was decided to include only a few issues of social-demographic nature, as described in frame 10. Other changes in the issues were not considered because contributions received would not change significantly the context of issues.

Frame 10. Control variables – demographic and social questions

(continue)

DEMOGRAPHIC AND SOCIAL INFORMATION Control Variables
69. What is your current or most recent job title? Translation: Qual seu atual ou mais recente cargo?
70. How many years of experience have you had in a sourcing related role? Translation: Quantos anos de experiência você possui na área de compras?

(conclusion)

DEMOGRAPHIC AND SOCIAL INFORMATION Control Variables
71. How many total years of work experience do you have? Translation: Quantos anos de experiência você possui no mercado de trabalho em geral?
72. What is your highest level of education? Please mark the most appropriate choice. Translation: Qual o seu nível de escolaridade? Por favor, marque a alternativa correspondente.
73. What is your age? Translation: Qual a sua idade?
74. What is your gender? Translation: Qual seu gênero?
75. Which category below best describes the industry where you currently work or most recently have worked? Please circle only one. Translation: Qual das opções abaixo melhor descreve o ramo de atuação da empresa em que você trabalha atualmente ou trabalhou recentemente? Selecione somente um.
76. What is the approximate number of employees employed by your business unit where you currently work or most recently have worked? Translation: Qual é o número aproximado de empregados da unidade da empresa em que você trabalha atualmente ou trabalhou recentemente?

Source: Elaborated by the author.

3.4 Structural Equation Modeling

Structural equation modeling (SEM) is a series of statistical techniques that incorporate and integrate factor analysis and path analysis (GARSON, 2012). Babin and Svensson (2012, p. 321) describe SEM as “a multivariate technique that considers and estimates the linear and/or causal relationships between multiple exogenous (independent) and endogenous (dependent) constructs through a simultaneous, multiple equation estimation process.”

Despite this research not having any hypotheses or models, the use of SEM is essential to the validation of the research instrument because it allows many statistical validity's tests of variables and constructs.

According to Hair et al. (2009), the SEM allows analysis of a large number of dependency relations simultaneously through equations that show the relationships between the constructs involved.

The same author states that there are three strategies for the implementation of SME: confirmatory modeling, rival models, and development models. This research will use the confirmatory modeling.

The estimation method to be used will be the *maximum likelihood*, where the values of the parameters most likely to achieve good model fit are found. This estimation method provides a powerful robustness against deviations from normality (HAIR et al., 2009).

For evaluation of the measurement model, the author suggests the following steps: definition of the development of individual constructs for a measurement model, planning a study that can produce empirical results, and evaluation of the validity of the measurement model, through the indices adjustment (HAIR et al., 2009).

The measurement model specifies each construct indicators checking their validity and reliability using Cronbach's Alpha (HAIR et al., 2009). Garson (2012) states that we should test, first, the convergent validity and discriminant validity of the model, so we can make the other tests with the structural model.

To Garson (2012), the convergent validity shows that the indicators of a latent variable or construct, are correlated to each other at an acceptable level and can be verified through the factor loadings of variance extracted (AVE) and composite reliability (CR). When there is convergent validity, it is expected that for each group of indicators, the factor loadings are relatively high, which means that all items converge to a common point (KLINE, 2005). Hair et al. (2009) suggests that factorials charge within the same construct must always be above 0.5.

Cronbach's alpha help in checking the internal consistency and the value recommended by Malhotra (2012) must be greater than 0.6. The parameter will be used for this research.

The CR respect to the total amount of variance score relative to the total score (MALHOTRA, 2012). The acceptable value for this case is the one indicated above 0.6, suggesting reliability in the construct (HAIR et al., 2009).

The AVE is how the scale is positively correlated with other measures of the same construct (MALHOTRA, 2012). The value of the stroke should be above 0.5 (HAIR et al., 2009).

The other validity to check is the discriminant one, which according to Kline (2005) examines the different constructs of variables have low correlations. This type of validity in the reviews the information that the constructs are unique and measure completely different phenomena (HAIR et al., 2009). Fornell and Larcker (1981) test helps to determine the discriminant validity by comparing the extracted variance of each construct with the shared variance, represented by the squared correlation between the constructs.

3.5 Pre-Test

Following translation step, a pre-test was prepared to the translated instrument. The pre-test aims to apply the data collection tool for a small sample in order to identify and eliminate potential problems understanding and filling out the questionnaire, as well as other questions that might arise during data collection. According to Malhotra (2012), the size of the sample can vary from 15 to 30 respondents depending on the heterogeneity of the population.

About 30 master's students of Unisinos graduate program were contacted and requested as for their availability to participate in the research on a Friday night, after a master class at the university. From 30 guests, 22 students agreed to participate. We also had the participation of two Ph.D. professors from Unisinos graduate program, who decided to help and participate.

We had a significant return of all 22 respondents, with some questions and suggestions about the survey's content. Armed with this information, discussion rounds were made with Prof. Hall to survey's changes and adjustments. It was decided that we would change only issues related to the semantics of questions to facilitate understanding.

Some statistical tests, for instrument reliability check, were performed using *SPSS Statistics* software. Initial tests using the Cronbach's Alpha reliability test showed results above 0.7 for all constructs of the instrument. According to Hair et al. (2009), results above 0.7 for Cronbach's alpha reliability test prove the scale statistical significance.

After applying the pre-test, it was decided not to change the questions of the survey.

3.6 Sample

According to Malhotra (2012), the target population is characterized by the set of all elements that share a certain set of characteristics sought by the researcher.

The population defined for data collection consists of professionals with some experience and knowledge in decision-making.

For this study, we addressed students of undergraduate courses in Engineering Production of 2 universities in the metropolitan area of Porto Alegre.

In meetings held with Professor Hall, he has always stressed that the questionnaire should be done in a controlled (or partially controlled) environment without interference of any kind, preventing the respondent from suffering any external influence. Because of the great difficulty of accessing professionals and corporate executives with experience in decision making and also the possibility to gather them in a specific environment to answer the questions, it was decided to carry out research with undergraduate students. Issues such as accessibility and ease to gather them in a controlled environment (classroom) were decisive in the choice.

The choice of undergraduate students may lead to negative consequences in the survey if they do not have enough experience in decision-making. This may cause inaccurate results, hampering statistical analysis. On the other hand, most of the students are professionals and already hold executive positions where they must make decisions. Another positive point is that the students had already addressed important disciplines in the graduation course that could substantiate their knowledge of decision-making in organizations. After a long round of discussions between those involved in this research, it was decided to collect data with this target audience.

First, the coordinators of the courses in question were contacted, who authorized data collection. In a second step, professors of the disciplines were contacted to make an appointment for data collection.

A sample of 204 respondents was collected in a period from July to August 2015. According to Freitas et al. (2000), over 100 responses, the larger the

sample size, the better the chances of getting a higher confidence level (statistical significance), which for this study, will be 95%.

3.7 Data Collection

The research was applied in person, without the use of electronic media. Respondents were addressed in the classroom. A short brief explanation was conducted about the research objectives and the importance of the reliability of the answers. All respondents were informed that participation in the survey was completely anonymous, without any form of identification in the questionnaires. Before starting to deliver questionnaires, the respondents were informed that they would be notified about the survey's results after its analysis and conclusion. An electronic e-mail group was given for registration of those who were interested in receiving the results. The respondents were given the time they deemed necessary to reply the questionnaire, individually.

3.8 Data Preparation

After data collection, a sample's preparation was made from 204 respondents in order to analyze data quality. First, an analysis of *missing data* was carried out, which totaled 114. Four steps for missing data processing indicated by Hair et al. (2009) were considered and included: identification of the type of missing data, determining the extent of missing data, randomization diagnosis, and selection of data imputation for valid missing values .

Considering the proportion of cases with the number of non-answered (missing) variables, the need for excluding three respondents was identified, as they presented more than 10% of non-answered questions for each questionnaire. Respondents number 19 (22 missing data), 46 (8 missing data) and 92 (39 missing data) were excluded, and the sample was adjusted to 201 respondents.

Missing data analysis was performed again in the adjusted sample ($n = 201$). Using *SPSS Statistics* software, we analyzed the pattern of missing data, and reached a randomized completely at random (MCAR Little's test: Chi-square = 1596.281, DF = 1616, Sig = 0.632) on 66 variables comprising the 5 main

constructs of the scale (locus of control, monitoring practices, bandwagon for outsource, cost and quality dynamics, and cost and quality mandate). The problem was corrected through data imputation. This data imputation method is one of the most used where missing values are replaced by the arithmetic mean of valid data for each variable (HAIR et al., 2009).

Regarding the analysis of atypical observations (outliers), indicating a unique combination of characteristics that differ from other observations, we used the D^2 Mahalanobis' test (HAIR et al., 2009). Mahalanobis' test evaluates the distance of each observation in a multidimensional space from the mean center of all observations.

The result of Mahalanobis' test, which was performed using the software *AMOS*, indicated 34 atypical observations (outliers) in the sample ($n = 201$).

These 34 outlier observations were removed from the database and Mahalanobis' test was performed again. In this new check, another 10 atypical observations were also detected and removed from the database. Mahalanobis' test was performed 3 more times, in which, 4, 4, and 1 atypical observations were removed from the database, respectively. Fifty-three atypical observations were taken from the total of 5 tests performed, reducing the final sample to 148 respondents.

After analyzing the missing data and the atypical observations, we evaluated the required statistical assumptions for the use of multivariate analysis. According to Hair et al. (2009), these assumptions aim to prevent distortions in the data and biases of the research that could impact the results. The author also stresses that the most important assumption in the multivariate analysis is normality, which refers to the data distribution.

Data normality was verified by analysis of kurtosis and skewness values (Hair et al., 2009). According to Kline (1998), the values indicated for kurtosis should be below 10, and the corresponding skewness values should stay below 3. Results above these figures indicate problematic distributions, i.e. do not represent normal distributions. Appendix D provides the table with the calculated values of skewness and kurtosis, where all results are within the values indicated in the literature.

4 RESULTS

4.1 Data Analysis

Data analysis was performed with *SPSS Statistics* software, the most popular package for statistical analysis in the world. This software is also the most used for quantitative data in social sciences (DANCEY; REIDY, 2013).

The Structural Equation Modeling tests were realized with *AMOS* software. Other tests were performed using *Microsoft Excel* software.

4.2 Sample Characteristics

Descriptive statistics provide simple summaries about the sample and on the comments that were made. This summary can be quantitative or visual. These reports may either form the basis of the initial description of the data, as part of a more extensive statistical analysis, or they may be sufficient by themselves (DANCEY; REIDY, 2013).

The collected data comprises an initial sample of 204 respondents reduced to 148 respondents after data preparation.

All respondents (100%) reported that they have ongoing bachelor's formation or higher.

As to gender, 30.3% of the sample are females, while 69.7% are males, as shown in Table 1. Sample age range is until 20 to 50 years, as shown in Table 2.

Table 1. Age data (sample)

Age	Percent
21-30	65.9%
31-40	20.4%
41-50	0.5%
until 20	13.3%
Total	100%

Source: Elaborated by the author.

Table 2. Gender (sample)

Gender	Percent
Female	30.3%
Male	69.7%
Total	100%

Source: Elaborated by the author.

The respondents' industry categories are distributed into: Aerospace (0.5%), Automotive (9%), Consumer Products (11.9%), High-tech (4%), General Manufacturing (45.3%), Pharmaceutical (0.5%) and other industry categories (28.9%), as shown in Table 3.

Table 3. Industry categories (sample)

Category	Percent
Aerospace	0.5%
Automotive	9.0%
Consumer Products	11.9%
High-Tech	4.0%
General Manufacturing	45.3%
Pharmaceutical	0.5%
Other	28.9%
Total	100%

Source: Elaborated by the author

When relating age, gender, and industry categories, we have the data described in Table 4.

Table 4. Industry category x Age x Gender

Industry category	Age				Gender	
	até 20	21-30	31-40	41-50	Female	Male
Aerospace	0.0%	0.0%	2.3%	0.0%	0.0%	.7%
Automotive	7.1%	11.5%	9.3%	0.0%	15.6%	8.2%
Consumer Products	7.1%	8.6%	4.7%	0.0%	9.4%	6.8%
High-Tech	7.1%	2.9%	4.7%	0.0%	6.3%	2.7%
General Manufacturing	39.3%	43.9%	44.2%	0.0%	39.1%	44.9%
Pharmaceutical	3.6%	0.0%	0.0%	0.0%	1.6%	0.0%
Other	35.7%	33.1%	34.9%	100.0%	28.1%	36.7%

Source: Elaborated by the author.

When analyzing the sample, we may observe that the general respondent profile refers to professionals working in several segments and having leadership and management positions, in their majority, as shown in Table 5.

Table 5. Experience x role

Role	Frequency	Experience (mean/years)	Percent %
Analyst	29	8	20%
Coordinator	35	7	24%
Director	3	6	2%
Trainee	5	2	3%
Manager	52	8	35%
Supervisor	18	12	12%
Technician	6	14	4%
TOTAL	148	8	100%

Source: Elaborated by the author

Also, the sample indicates that the great majority of respondents has high experience in labor market, and 73% of the participants in the survey correspond to professionals with leadership positions and executive profile, 20% occupy analyst positions, 4% of technical level positions, and only 3% are trainees as shown in Table 6.

Table 6. Experience x role (pooled information)

Role	Frequency	Experience (mean/years)	Percent %
Executive	108	8	73%
Analyst	29	8	20%
Technician	6	14	4%
Trainee	5	2	3%
TOTAL	148	8	100%

Source: Elaborated by the author.

4.3 Variance Analysis – ANOVA

When the definition of the study population was made, it was decided to select a sample of professionals with some experience and knowledge in decision-making. One of the survey's questions, specifically number 68, measured the degree of respondent's experience in decision-making, using a 5-point "LIKERT"-type scale. Responses higher or equal to 3 denote experience in this process. Responses lower than 3 denote lack of experience of these respondents on decision-making. The scale for this point is measured as "1-no experience," "2-Little experience," "3-Some experience," "4-Substantial experience" and "5-Extensive experience." The description of the groups can be seen in Table 7.

Table 7. Groups with different levels of decision-making experience

Group	Frequency	Percent
< 3 (no experience)	32	21.6%
>=3 (some or higher experience)	116	78.4%
Total	148	100%

Source: Elaborated by the author.

An ANOVA test was performed to check for statistical significance between the 2 groups. The analysis of variance (ANOVA) is a statistical technique used to verify that samples of two or more populations suggest groups with equal average (HAIR et al., 2009).

Only 2 from 66 questions that comprised the top 5 constructs (locus of control, monitoring practices, bandwagon for outsourcing, cost and quality dynamics, and cost and quality mandate) presented values that characterize differences in the averages of the two groups. The variables, Q8 (0.005), and Q9 (0.43) were statistically significant ($p < 0.05$) indicating that there is difference in the average of respondents. It was decided to continue the analysis without suppressing these 2 questions (Q8 and Q9).

The ANOVA test results can be viewed in Table 8.

Table 8. Variance analysis results in experience level – ANOVA (continue)

Variable	F	Sig.	Variable	F	Sig.	Variable	F	Sig.
Q1	.121	.729	Q23	.000	.990	Q45	1.815	.180
Q2	.100	.752	Q24	.463	.497	Q46	2.085	.151
Q3	2.091	.150	Q25	.049	.826	Q47	.111	.740
Q4	.474	.492	Q26	1.432	.233	Q48	.957	.330
Q5	.360	.550	Q27	.355	.552	Q49	.283	.595
Q6	.020	.887	Q28	2.983	.086	Q50	1.272	.261
Q7	.090	.765	Q29	.910	.342	Q51	.756	.386
Q8	8.082	.005	Q30	1.332	.250	Q52	.007	.936
Q9	4.151	.043	Q31	.183	.670	Q53	2.131	.146
Q10	.007	.933	Q32	2.352	.127	Q54	.390	.533
Q11	3.380	.068	Q33	2.489	.117	Q55	.268	.606
Q12	1.670	.198	Q34	.565	.453	Q56	.004	.949
Q13	1.092	.298	Q35	.014	.906	Q57	1.611	.206
Q14	.938	.334	Q36	.739	.391	Q58	1,845	.177
Q15	2.073	.152	Q37	.470	.494	Q59	.085	.771

(conclusion)

Variable	F	Sig.	Variable	F	Sig.	Variable	F	Sig.
Q16	.191	.663	Q38	2.506	.116	Q60	.438	.509
Q17	3.507	.063	Q39	.537	.465	Q61	.937	.335
Q18	.370	.544	Q40	1.011	.316	Q62	.005	.945
Q19	1.111	.294	Q41	.168	.682	Q63	0.000	1.000
Q20	1.085	.299	Q42	.572	.451	Q64	.073	.788
Q21	.928	.337	Q43	.151	.698	Q65	1,922	.168
Q22	.120	.729	Q44	.310	.578	Q66	1.343	.248

Source: Elaborated by the author.

4.4 Confirmatory Factorial Analysis

The analysis and adaptation of scales used in the constructs was performed by Structural Equation Modeling (SEM) using confirmatory factor analysis (CFA), which evaluates the internal consistency of a set of indicators in a latent variable (Hair et al., 2009).

There was also the convergent validity from the composite reliability (CR) analysis, the variance extracted (AVE) and the standardized factor weights of 66 indicators for each constructs. In addition, individual analysis was performed with each construct using Cronbach's Alpha analysis, which is a method of internal consistency of the constructs, so that it can be verified that the indicators of the scale measure the same construct. Hair et al. (2009) indicate that there is reliability when Cronbach's Alpha value is at least 0.60.

The following presents the results obtained for each of the constructs of this research.

4.4.1 Locus of control construct

The initial scale to assess locus of control construct contained 9 items, namely: Q58, Q59, Q60, Q61, Q62, Q62, Q64, Q65, and Q66. Upon completion of the first analysis, values were found that did not reach the minimum indicated by literature, as shown in Table 9.

Table 9. CFA – Locus of Control Construct (Initial analysis) (continue)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q58	0.525	0.70	0.20	0.68

(conclusion)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q59	0.39	0.70	0.20	0.68
Q60	0.316			
Q61	0.283			
Q62	0.444			
Q63	0.539			
Q64	0.471			
Q65	0.571			
Q66	0.521			

Source: Elaborated by the author.

Two items were eliminated with weaker factor weights, namely Q59 and Q61. Even with the elimination, values indicated by literature were not obtained. The AVE value (0.25) remained below the recommended one. Three additional items were eliminated, Q58, Q60, and Q62. The AVE (0.34) still remained below the recommended one. Another item was then eliminated, Q64.

Table 10. CFA – Locus of Control Construct (Adjusted)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q65	0.806	0.67	0.51	0.64
Q66	0.611			

Source: Elaborated by the author.

The elimination of this last item led to the appropriate statistical results. The values of CR (0.67) and Cronbach's Alpha (0.64) are higher than the values recommended by Hair et al. (2009) and Malhotra (2012). Table 10 shows the statistical results of the confirmatory factor analysis and factor weights of the indicator results.

4.4.2 Monitoring practices construct

The initial scale to assess the monitoring practices construct contained 30 items, as follows: Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q28, Q29, Q30, Q31, Q32, Q33, Q34, Q35, Q36, Q37, Q38, Q39, Q40, Q41, and Q42. Upon completion of the initial analysis, it was found

that the obtained values did not reach the minimum indicated in the literature, as shown in Table 11.

Table 11. CFA – Monitoring practices construct (Initial analysis)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q7	0.408			
Q8	0.170			
Q9	0.287			
Q10	0.638			
Q11	0.288			
Q12	0.299			
Q13	0.729			
Q14	0.210			
Q15	0.220			
Q16	0.791			
Q17	0.250			
Q18	0.184			
Q19	0.499			
Q20	0.142			
Q21	0.176	0.82	0.17	0.85
Q28	0.553			
Q29	0.095			
Q30	0.360			
Q31	0.662			
Q32	0.301			
Q33	0.307			
Q34	0.759			
Q35	0.247			
Q36	0.067			
Q37	0.684			
Q38	0.266			
Q39	0.117			
Q40	0.452			
Q41	0.194			
Q42	0.270			

Source: Elaborated by the author

Initially, all items with factor weights below 0.400 were eliminated, namely Q8, Q9, Q11, Q12, Q14, Q15, Q17, Q18, Q20, Q21, Q29, Q30, Q32, Q33, Q35, Q36, Q38, Q39, Q41, and Q42, with a total of 20 items. Even with the elimination of these 20 items, the values indicated by literature were not obtained. The AVE

value (0.42) remained below the recommended one. Three additional items were eliminated, Q7, Q28, and Q40.

Table 12. CFA – Monitoring practices construct (Adjusted)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q10	0.58			
Q13	0.793			
Q16	0.805			
Q19	0.492	0.87	0.5	0.87
Q31	0.63			
Q34	0.827			
Q37	0.741			

Source: Elaborated by the author

The elimination of the last 3 items led to appropriate statistical results, which is consistent with the recommended values by Hair et al. (2009) and Malhotra (2012). Table 12 shows the statistical results of the confirmatory factor analysis and factor weights of monitoring practices construct.

4.4.3 Bandwagon pressure for outsourcing construct

The initial scale to measure the bandwagon for outsourcing construct contained 15 items, as follows: Q43, Q44, Q45, Q46, Q47, Q48, Q49, Q50, Q51, Q52, Q53, Q54, Q55, Q56, and Q57. Upon completion of the initial analysis, it was found that the obtained values did not reach the minimum indicated in the literature, as shown in Table 13.

Table 13. CFA – Bandwagon pressure for outsourcing construct (Initial analysis)
(continue)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q43	0.208			
Q44	0.172			
Q45	0.610			
Q46	0.591			
Q47	0.555	0.82	0.26	0.82
Q48	0.753			
Q49	0.349			
Q50	0.477			

(conclusion)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q51	0.601	0.82	0.26	0.82
Q52	0.618			
Q53	0.652			
Q54	0.579			
Q55	0.540			
Q56	0.253			
Q57	0.117			

Source: Elaborated by the author

Initially, all items with factor weights below 0.600 were eliminated, namely Q43, Q44, Q46, Q47, Q49, Q50, Q54, Q56, and Q57. Even with the elimination of these 8 items, the values indicated by literature were not obtained. The AVE (0.41) remained below recommended. Three additional items with low factor weights were eliminated, Q45, Q48, and Q55.

Table 14. CFA – Bandwagon for outsourcing construct (Adjusted)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q51	0.669	0.77	0.52	0.76
Q52	0.782			
Q53	0.717			

Source: Elaborated by the author.

The elimination of the last 3 items led to appropriate statistical results, which is consistent with the recommended values by Hair et al. (2009) and Malhotra (2012). Table 14 shows the statistical results of the confirmatory factor analysis and factor weights of bandwagon for outsourcing construct.

4.4.4 Cost and quality dynamics construct

The initial scale to assess the cost and quality dynamics construct contained 6 items, as follows: Q4, Q5, Q6, Q25, Q26, and Q27. Upon completion of the initial analysis, it was found that the obtained values did not reach the minimum indicated in the literature, as shown in Table 15.

Table 15. CFA – Cost and quality dynamics construct (Initial analysis)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q4	0.479	0.3	0.24	0.13
Q5	0,945			
Q6	-0.481			
Q25	0.164			
Q26	-0.012			
Q27	0.284			

Source: Elaborated by the author

Initially, all items with low factor weights were eliminated, namely Q6, Q25, Q26, and Q27.

Table 16. CFA – Cost and quality dynamics construct (Adjusted)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q4	0.547	0.65	0.49	0.56
Q5	0.820			

Source: Elaborated by the author.

The elimination of these last 4 items did not reach the appropriate statistical results. The results for AVE (0.49) and Cronbach's Alpha (0.56) are lower than the values recommended by Hair et al. (2009) and Malhotra (2012). Only the value for CR (0.65) is higher than the one recommended by Hair et al. (2009) and Malhotra (2012). Table 16 shows the statistical results of the confirmatory factor analysis and factor weights for the cost and quality dynamics construct.

4.4.5 Perception of cost and quality mandate construct

The initial scale to assess the cost and quality construct mandate contained 6 items, as follows: Q1, Q2, Q3, Q22, Q23, and Q24. Upon completion of the initial analysis, it was found that the obtained values did not reach the minimum indicated in the literature, as it is shown in Table 17.

Table 17. CFA – Cost and quality mandate construct (Initial analysis)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q1	0.521	0.74	0.33	0.72
Q2	0.522			
Q3	0.349			
Q22	0.637			
Q23	0.730			
Q24	0.611			

Source: Elaborated by the author.

Initially, all items with low factor weights were eliminated, namely, Q1, Q2, and Q3.

Table 18. CFA – Cost and quality mandate construct (Adjusted)

Variable	Factorial Weights	C.R.	AVE	Cronbach's Alpha
Q22	0.847	0.76	0.53	0.73
Q23	0.572			
Q24	0.731			

Source: Elaborated by the author.

The elimination of the last 3 items led to appropriate statistical results, which is consistent with the recommended values by Hair et al. (2009) and Malhotra (2012). Table 18 shows the statistical results of the confirmatory factor analysis and factor weights for cost and quality mandate construct.

4.5 Discriminant Validity

The discriminant validity of the constructs was analyzed from Fornell and Larcker (1981) test. The test suggests comparing the extracted variance of each construct with the shared variance represented by the construct's correlation square. Thus, there is discriminant validity when the AVE values are greater than shared variance. The correlation value is the value of the AVE obtained in the previous analysis phase of convergent validity. The results of this analysis are shown in Table 19.

Table 19. AVE – Variance extracted results

Constructs	Locus of Control	Monitoring Practices	Bandwagon Outsourcing	Cost and Quality Dynamics	Cost and Quality Mandate
Locus of Control	0.51				
Monitoring Practices	0.10	0.50			
Bandwagon Outsourcing	0.09	0.05	0.52		
Cost and Quality Dynamics	0.03	0.21	0.26	0.49	
Cost and Quality Mandate	0.19	0.23	0.05	-0.05	0.53

Source: Elaborated by the author.

Table 20 shows the comparison between the AVE (red) and shared variances among constructs. The results demonstrate the discriminant validity of the constructs of this research.

Table 20. Comparison between variance extracted and covariances

Constructs	Locus of Control	Monitoring Practices	Bandwagon Outsourcing	Cost and Quality Dynamics	Cost and Quality Mandate
Locus of Control	0.51				
Monitoring Practices	0.01	0.50	0.00	0.00	0.00
Bandwagon Outsourcing	0.01	0.00	0.52	0.00	0.00
Cost and Quality Dynamics	0.00	0.04	0.07	0.49	0.00
Cost and Quality Mandate	0.04	0.05	0.00	0.00	0.53

Source: Elaborated by the author.

5 DISCUSSION

Multivariate analysis of data presented significant results that altered significantly the research instrument proposed for this work. Through confirmatory factorial analysis (CFA), composite reliability (CR), Cronbach's

Alpha (CA) and extracted variance (AVE) tests, it was possible to identify the existence of convergent validity.

The first analyzed construct was the **locus of control**, which is nothing more than individual beliefs that he/she influences the outcomes of events in their lives (internal) as opposed to the influence of forces such as chance or fate (external). Nine questions were initially structured for this construct. In analyzing the data, the elimination of seven questions was needed, in a systematic way, because the investigated variables could present statistical significance to validate it. After exclusion of these questions, the results showed values consistent with the ones recommended by Hair et al. (2009) and Malhotra (2012), and the composite reliability (CR) was up 0.6 and Cronbach's Alpha (CA) was above 0.6. Also, the extracted variance (AVE) was higher than the 0.5 recommended by Hair et al. (2009) and Malhotra (2012).

Questions Q65 and Q66 only remained in the instrument. These questions explicitly measure the concept of the internal locus of control, where that individual really believes to be responsible and to control their actions, invariably leading to success (LEFCOURT, 1991; ROTTER, 1966). In this case, the subject is not concerned with external pressures and has the full conviction that he/she is in control (ROTTER 1966; SPECTOR, 1988; WENZEL, 1993).

The result of the deleted questions can be attributed in part to differences in personality traits described by Pervin and John (2004). Emotionally self-assured people, who are balanced and socially active, may have responded in a way, while people with different emotions may have gone the other way. On the other hand, institutional issues combined with behavioral issues may also have negatively influenced the behavior of answers. The deleted questions are more related to bias external locus of control, where the individual still believes he/she is in control, but that the results of their actions are subject to external influences (ROTTER, 1990). Perhaps the respondents have not properly understood the essence of the questions, confusing matters of internal forum (individual) with the external forum of subjects (institutional).

The second analyzed construct were the **monitoring practices**, which comprise the monitoring capability of a supplier by a contractor and the instruments used for this control (BOWERSOX, 2007; BROWN, 2003; PURDY; SAFAYENE, 2000; WRIGHT et al., 2000). From 30 questions contained in the

initial scale, only 9 were considered as statistically significant in the end. The questions were taken systematically, due to problems in the AVE, which indicate that there is more variance error explained than variance of the measure (Hair et al., 2009). The CR values and CA were high (CR> and CA 0.6> 0.6) from the first test, which shows the internal consistency of the construct. The questions that had less error variation (AVE> = 0.5) were Q10, Q13, Q17, Q19, Q31, Q33, Q35, and Q37, which are variables that measure the frequency with which organizations use research, incentives and audits to monitor the actions of suppliers.

The questions that measured this construct comprised the longest part of the survey. In some cases, the similarity between the questions was very large, changing only one or two words in the meaning and understanding. An inattentive respondent could make mistakes in interpreting the question, which may have caused inconsistency in the response.

The third construct analyzed was the **bandwagon pressure for outsourcing**, which is the pressure suffered by the decision-makers to outsource. This pressure may be silent, because the decision-maker can take into account the behavior of its competitors by outsourcing. If competitors are outsourcing, the decision maker can conclude that outsourcing is the following correct path (SACHSIDA, 2009; TOBERT; ZUCKER, 1983; REINGANTUM, 1981). From 15 initial questions, 13 were eliminated, considering only 3 statistically significant. As in the previous construct, the questions had to be systematically removed due to problems in the AVE, which presented values below 0.5. The CR values and Cronbach Alpha were high (CR>0.6 and CA> 0.6) since the first test, which also indicates the internal consistency of the construct.

The questions that had less error variation (AVE>=0.5) were Q51, Q52, and Q53, which measure issues as market uncertainty, personal consequences for the decision maker, and the perception of competitor's outsourcing level. These questions were perfectly aligned with theory. According to Cialdini and Goldstein (2004), a manager makes a decision based on attitudes of their competitors believed to be making the right decision. DiMaggio and Powell (1983) complement stating that competitive pressure causes the decision maker to be closer to their competitors and take the same actions that they take at the time, otherwise they face sanctions for their actions.

The questions excluded from this last construct, in its structure, were effectively aligned to the theories used as a basis for its development. However, the results showed values for AVE below 0.5, not recommended by Hair et al. (2009). This variance error may be due to sampling error or random answers.

The fourth construct analyzed was **Cost and Quality dynamics**, which are cost standards and quality observed and measured in a given period (WARD, 1995). The initial range for this construct contained 6 questions, and even after the systematic elimination of questions with lower factor weights, the construct was not statistically significant (CR= 0.30; CA= 0.13; AVE= 0.24).

The perception of respondents for the issues of this construct may not have been satisfactory. The questions measured understanding of respondents with respect to the increase and decrease of costs and quality over-time. It is likely that common sense has prevailed here on the individual experiences on each. There is a chance that the respondents have not experienced many different situations in their professional careers, and as a result, do not have subsidies to properly choose one of the proposed issues.

The fifth and final construct analyzed was the **cost and quality mandate**, which is the institutional pressure to obtain lower costs and increased quality (BARNEY, 2002; HALL, 2012). The scale for this construct contained initially 6 questions, the values of CR (0.74) and Cronbach Alpha (0.72), indicating internal consistency of the construct. However, the AVE (0.33) was lower than the recommended by Hair et al. (2009). Variables with lower factor weights were removed and the remaining questions were Q22, Q23, and Q24. All these questions specifically measure quality and are perfectly aligned with the theory, which can explain in part why these issues had results better than those related to cost did. Quality has a huge impact on the decision since people tend to look for strategies that bring more quality to their product or service (GRAY et al., 2009). Makers will always seek for cost reduction and increased quality (HALL, 2012).

Questions related to cost were not statistically significant, and can be explained in part by institutional issues. Perhaps the companies in which respondents work are very different at the institutional level, which may have contributed to a sampling error. The pressure imposed by the institution to reduce

costs pressing human behavior to be more effective in the search for lower costs does not always bring satisfactory results (BEER, 1997).

The discriminant validity analysis has confirmed positive statistical significance through Fornell and Larcker (1981) test, indicating that constructs measure different things.

The instrument validation presented several problems related to the convergent validity of all constructs. Several factors may have contributed for the results to not be positive.

Since its implementation in the pre-tests, respondents complained much of the length of the questionnaire, claiming to be tiring and too long. In fact, the extension of the instrument was the target of meetings with Professor Hall throughout the preparation stage for the data collection. Even with the negative feedback from the respondents, it was decided to keep the research in this way. During the application of research, once again there were complaints about the length of the questionnaire. This difficulty reported by respondents may have led to inconclusive and random responses, causing the subjects to have opted for a response behavior very oblivious to the questions, indicating their lack of interest or willingness to complete the questionnaire briefly.

Another negative point highlighted by the respondents, both in the pre-test and the research, was the similarity between many of the questions. The main difficulty of the subjects of the research was to distinguish between the questions, since most questions were only different because of one word, with many of them having very similar spellings. A reader more inattentive, tired, or disinterested, could easily confuse the real purpose of the question. In the construct Monitoring Practices, for example, there are many similar questions, such as Q13, Q16, Q28, Q31, Q34, Q37, and Q40. These questions have the same structure, with changes in some terms of the sentences. These questions were also discussed extensively in meetings with Prof. Hall, but it was decided to continue this way.

The construct Monitoring Practices should have the number of questions revised since it is too extensive and out of proportion compared to the others. This was the construct with more validation problems. Another solution could be breaking it into sub-constructs since different topics are approached. The construct deals with topics such as consumer research, audits, incentives to the supplier, all related to cost and quality. A more detailed analysis, based on the

obtained validation results, takes the need to divide it into at least another 6 sub-constructs, contemplating the consumer research, audits, and incentives to the supplier, separated by cost and quality.

The constructs Cost and Quality Dynamics and Perception of Cost and Quality can also be divided into sub-constructs, separated by cost and quality, as they measure different topics.

The target audience for this study can also have contributed negatively for the results here seen. Maybe the respondents do not have enough experience in the situations described in the research instrument, which may have affected their answers significantly. Many times, it was discussed with Prof. Hall that making the research with graduate students could bring problems to the survey, even if they had some experience in decision-making. However, due to the difficulty of accessing more qualified and experienced professionals in the situations described, it was decided to continue the research with students.

To develop this research, it was not possible to change almost nothing of the original proposal, as it is a validation of a development tool by Prof. Hall. In the co-orientation process, it became very clear that the questionnaire could not be changed before validation, even with all the problems detected in the pre-test stage. It is possible that greater flexibility on the part of Prof. Hall could have significantly improved some difficulties seen during the process of preparing the research.

Despite the research proposal being very interesting and current, the entire instrument must be revised, with a further deepening on the theoretical framework used to build the questionnaire. Perhaps the Prof. Hall's proposal does not conform completely to the Brazilian public and must be significantly revised and remodeled.

The aim of this study was partially achieved, since it was not possible to validate the entire measurement instrument. Many questions had to be eliminated and the measurement of the constructs in its entirety was impaired.

6 CONCLUSIONS

The "law of outsourcing" is a reality in Brazil. After years of discussion in the National Congress, it was approved in April 2015, but there is still no conviction that this law will change substantially the country's economy, nor its implications on the behavior of Brazilian organizations are known.

The decision-making process of organizations is dependent on a number of factors. Institutional and behavioral issues are among these. The institution alone is already able to influence decisions, but there is still a little explored part in the decision-making process, which is the human behavior.

The main contribution of this study was to test and validate a research tool developed by Professor David Caleb Hall from Wright State University in United States. Professor Hall's studies, since his doctoral thesis in 2012, have advanced in issues that influence decision making when it comes to outsourcing.

Understanding the decision-making process is something very complex, so there is a need to analyze the motivations, pressures, and characteristics that lead a manager or decision maker to follow a specific path, in this case, to outsource the production of a product, service, or perform it with its own structure.

The instrument developed by Professor Hall has been tested in a Brazilian sample composed of professionals from various sectors of the economy and varied experience in decision-making. The questions were designed based on five major constructs, institutional theories, and psychology theories. Each of the constructs proposed a specific measurement of decision behavior.

The statistical tests indicated some problems in survey instrument. Many variables had to be taken from all the evaluated constructs, due to results, which were below from recommended by literature.

When evaluated the convergent validity, all constructs have presented inconsistency in factor weights (CFA), reliability tests (CR, Cronbach's alpha) and extracted variance (AVE).

The construct locus of control, which definition is the degree an individual believes that he/she influences the outcomes of events in their lives (internal) as opposed to the influence of forces such as chance or fate (external), had 7 questions removed in a total of 9. These results may have been caused by significant differences in personality traits and the incorrect understanding of the questions.

The construct monitoring practices is the supplier performance's

management systems consist of practices used to evaluate supplier performance cost or quality. This one had 21 questions removed in a total of 30. Similarities between questions of this construct may have caused the incorrect understanding by the respondents.

The construct bandwagon pressure for outsourcing is the pressure that the competitors exert on the decision maker to conform to the perceived peer group's norm. This construct had 12 questions removed in a total of 15. The removed questions presented AVE value below to 0.5. This variance error may be due to sampling error or random answers.

The cost and quality construct is defined by dynamics of the pattern of change associated with supplier costs and quality over-time. Even with the elimination of questions with weaker factorials weights, the convergent validity results were statistically insignificant for all questions. It is estimated that common sense has prevailed and that the respondents do not have enough professional experience in this matter to answer the questions satisfactorily.

The last construct is the perception of cost and quality mandate, whose main definition is that cost mandate is the emphasis, expectation, or pressure from your organization to lower costs or meet cost objectives. The quality mandate is from your organization to increase costs or meet quality objectives. In this construct, 3 questions are removed from a total of 6. Questions related to cost were not statistically significant, and can be explained in part by institutional issues, due to differences in respondent company's institutional level.

Most of the non-significant issues on confirmatory factor analysis can be attributed at random in the sample. The instrument was considered inadequate for the target audience of this research. The respondents considered the questionnaire too long and difficult to understand. These factors, which were better addressed in the end of the previous chapter, may have contributed negatively to the results seen here.

Different results may arise in future testing of the measuring instrument with another sample of the population, however the actual results point to an urgent need of redesign of the indicators, using questions that are more accurate and a less number of indicators. For this redesign, a new exploratory step must be realized, starting with the actual research instrument. New ideas may emerge and some indicators may be replaced by others more adjusted ones with higher

factor weights during the instrument modeling process, suggesting higher convergent validity.

The aim of this study was partially achieved, since it was not possible to validate the entire measurement instrument. Many questions had to be eliminated and the measurement of the constructs in its entirety was impaired.

6.1 Limitations and future research

Among the study limitations, it highlights the subjectivity of outsourcing and the lack of previous studies, which could provide greater theoretical support. In this research, we worked on some unusual constructs not addressed often as bandwagon pressure, cost, and quality dynamics, cost and quality mandate. The phenomenon of outsourcing is very comprehensive, so it cannot be limited to a single empirical study.

The topic needs a permanent research process characterized by the market dynamism, influenced by economic and social issues.

The scale development process eliminated a very high number of variables, which is another limitation of the study. The scale validation procedures, and reliability indicators eliminated questions in all constructs that met the remaining criteria in the instrument. From 66 indicators initially considered in the measurement of constructs, 48 had to be deleted during the validity and reliability tests.

The results were obtained from empirical data analyzed by statistical procedures adequate to meet the objectives set for the study. However, these results cannot be generalized, since they relate to the sample selected for this particular search. The application of the instrument in other samples with different characteristics may require additional adjustments and generate similar results and thus corroborate for the validation of the proposed instrument.

For future studies, it is necessary to address samples from different populations and seek a redesign of the survey proposed here. For this, we must go back into the field to make an exploratory qualitative phase in order to detect anomalies and discrepancies from the audience's understanding. Allied to this, we need to further review literature to find more effective means of developing the research instrument.

To achieve results that are more purposeful in future studies, federations, associations and industry, and trade institutes must be involved as a way of partnership and professional achievement of these organizations.

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APPENDIX A – ORIGINAL SURVEY INSTRUMENT

Supply Chain Management Practices Survey

Thank you for participating in the Outsourcing Decision Experiment. This survey is a follow-up to the Outsourcing Decision Experiment and will ask you questions about your organization's supply chain management practices. The survey will provide us with insights into how supply chain management practices may impact outsourcing and will take approximately 30 minutes of your time to complete.

Please answer the following questions based on how supply chain cost is perceived in your organization.

1. I am expected to procure lower costs.

Strongly Disagree Disagree Neither Agree Strongly Agree

2. I feel pressure to procure lower costs.

Strongly Disagree Disagree Neither Agree Strongly Agree

3. My boss(es) emphasizes cost objectives.

Strongly Disagree Disagree Neither Agree Strongly Agree

4. Supplier costs do not change.

Strongly Disagree Disagree Neither Agree Strongly Agree

5. Supplier costs decrease over-time.

Strongly Disagree Disagree Neither Agree Strongly Agree

6. Supplier costs increase over-time.

Strongly Disagree Disagree Neither Agree Strongly Agree

Please answer the following questions about your organization's supply chain cost monitoring practices.

7. How frequently does your organization use customer complaints to help identify supplier cost issues?

Almost Never Infrequently Occasionally Frequently Almost Always

8. Customer complaints are an inexpensive way to identify supplier cost issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

9. Customer complaints are an effective way to identify supplier cost issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

10. How frequently does your organization use customer surveys to help identify supplier cost issues?

Almost Never Infrequently Occasionally Frequently Almost Always

11. Customer surveys are an inexpensive way to identify supplier cost issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

12. Customer surveys are an effective way to identify supplier cost issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

13. How frequently does your organization use supplier off-site audits to help identify supplier cost issues?

Almost Never Infrequently Occasionally Frequently Almost Always

14. Supplier off-site audits are an inexpensive way to identify supplier cost issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

15. Supplier off-site audits are an effective way to identify supplier cost issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

16. How frequently does your organization use supplier on-site audits to help identify supplier cost issues?

Almost Never Infrequently Occasionally Frequently Almost Always

17. Supplier on-site audits are an inexpensive way to identify supplier cost issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

18. Supplier on-site audits are an effective way to identify supplier cost issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

19. How frequently does your organization use supplier incentives (e.g., cost or profit sharing) to help identify supplier cost issues?

Almost Never Infrequently Occasionally Frequently Almost Always

20. Supplier incentives (e.g., cost or profit sharing) are an inexpensive way to identify supplier cost issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

21. Supplier incentives (e.g., cost or profit sharing) are an effective way to identify supplier cost issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

Please answer the following questions based on how supply chain quality is perceived in your organization.

22. I am expected to procure higher conformance quality.

Strongly Disagree Disagree Neither Agree Strongly Agree

23. I feel pressure to procure higher conformance quality.

Strongly Disagree Disagree Neither Agree Strongly Agree

24. My boss(es) emphasize(s) conformance quality objectives.

Strongly Disagree Disagree Neither Agree Strongly Agree

25. Supplier conformance quality does not change.

Strongly Disagree Disagree Neither Agree Strongly Agree

26. Supplier conformance quality decreases over-time.

- Strongly Disagree Disagree Neither Agree Strongly Agree

27. Supplier conformance quality increases over-time.

- Strongly Disagree Disagree Neither Agree Strongly Agree

Please answer the following questions about your organization's supply chain conformance quality monitoring practices.

28. How frequently does your organization use customer complaints to help identify supplier conformance quality issues?

- Almost Never Infrequently Occasionally Frequently Almost Always

29. Customer complaints are an inexpensive way to identify supplier conformance quality issues.

- Strongly Disagree Disagree Neither Agree Strongly Agree

30. Customer complaints are an effective way to identify supplier conformance quality issues.

- Strongly Disagree Disagree Neither Agree Strongly Agree

31. How frequently does your organization use customer surveys to help identify supplier conformance quality issues?

- Almost Never Infrequently Occasionally Frequently Almost Always

32. Customer surveys are an inexpensive way to identify supplier conformance quality issues.

- Strongly Disagree Disagree Neither Agree Strongly Agree

33. Customer surveys are an effective way to identify supplier conformance quality issues.

- Strongly Disagree Disagree Neither Agree Strongly Agree

34. How frequently does your organization use supplier off-site audits to help identify supplier conformance quality issues?

- Almost Never Infrequently Occasionally Frequently Almost Always

35. Supplier off-site audits are an inexpensive way to identify supplier conformance quality issues.

- Strongly Disagree Disagree Neither Agree Strongly Agree

36. Supplier off-site audits are an effective way to identify supplier conformance quality issues.

- Strongly Disagree Disagree Neither Agree Strongly Agree

37. How frequently does your organization use supplier on-site audits to help identify supplier conformance quality issues?

- Almost Never Infrequently Occasionally Frequently Almost Always

38. Supplier on-site audits are an inexpensive way to identify supplier conformance quality issues.

- Strongly Disagree Disagree Neither Agree Strongly Agree

39. Supplier on-site audits are an effective way to identify supplier conformance quality issues.

- Strongly Disagree Disagree Neither Agree Strongly Agree

40. How frequently does your organization use supplier incentives (e.g., pay-for-performance or supplier chargebacks) to help identify supplier conformance quality issues?

Almost Never Infrequently Occasionally Frequently Almost Always

41. Supplier incentives (e.g., pay-for-performance or supplier chargebacks) are an inexpensive way to identify supplier conformance quality issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

42. Supplier incentives (e.g., pay-for-performance or supplier chargebacks) are an effective way to identify supplier conformance quality issues.

Strongly Disagree Disagree Neither Agree Strongly Agree

Please answer the following questions based on your beliefs about outsourcing.

43. The outsourcing decisions of your competitors are optimal.

Strongly Disagree Disagree Neither Agree Strongly Agree

44. In your industry the majority of firms' outsourcing decisions are optimal.

Strongly Disagree Disagree Neither Agree Strongly Agree

45. Managers feel less responsible for their choice to outsource because competitors are outsourcing.

Strongly Disagree Disagree Neither Agree Strongly Agree

46. Competitors' decisions to outsource compel managers to outsource contrary to their personal opinion.

Strongly Disagree Disagree Neither Agree Strongly Agree

47. Managers may be encouraged to outsource because of the unspoken rules and standards of their organizations.

Strongly Disagree Disagree Neither Agree Strongly Agree

48. Managers feel that their competitors' outsourcing provides evidence that outsourcing is the 'right' thing to do.

Strongly Disagree Disagree Neither Agree Strongly Agree

49. Managers outsource because outsourcing is the norm in their profession.

Strongly Disagree Disagree Neither Agree Strongly Agree

50. Managers feel threatened or intimidated into outsourcing.

Strongly Disagree Disagree Neither Agree Strongly Agree

51. Managers feel outsourcing is a standard response to environmental uncertainty.

Strongly Disagree Disagree Neither Agree Strongly Agree

52. Managers believe outsourcing reduces the risk of negative personal consequences is reduced.

Strongly Disagree Disagree Neither Agree Strongly Agree

53. Managers believe the benefit from outsourcing increases as more competitors outsource.

Strongly Disagree Disagree Neither Agree Strongly Agree

54. Managers believe the benefit from internal production decreases as more competitors outsource.

Strongly Disagree Disagree Neither Agree Strongly Agree

55. Managers believe that competitors are outsourcing optimally and are better informed about outsourcing.

Strongly Disagree Disagree Neither Agree Strongly Agree

56. Managers outsource to pursue low costs.

Strongly Disagree Disagree Neither Agree Strongly Agree

57. Managers outsource to pursue high conformance quality.

Strongly Disagree Disagree Neither Agree Strongly Agree

Please answer the following questions based on how the statement describes you.

58. When I make plans, I am almost certain that I can make them work.

Strongly Disagree Disagree Neither Agree Strongly Agree

59. Getting people to do the right things depends upon my ability; luck has nothing to do with it.

Strongly Disagree Disagree Neither Agree Strongly Agree

60. What happens to me is my own doing.

Strongly Disagree Disagree Neither Agree Strongly Agree

61. I complete tasks successfully.

Strongly Disagree Disagree Neither Agree Strongly Agree

62. I handle tasks smoothly.

Strongly Disagree Disagree Neither Agree Strongly Agree

63. I come up with good solutions.

Strongly Disagree Disagree Neither Agree Strongly Agree

64. I prefer a job where I have a lot of control over what I do and when I do it.

Strongly Disagree Disagree Neither Agree Strongly Agree

65. I prefer to be a leader rather than a follower.

Strongly Disagree Disagree Neither Agree Strongly Agree

66. I enjoy having control over my own destiny.

Strongly Disagree Disagree Neither Agree Strongly Agree

67. When you must choose between the two, you dress for fashion, not for comfort.

Strongly Disagree Disagree Neutral Agree Strongly Agree

68. Please, indicate your experience-level in decision-making process.

No Knowledge Little Knowledge Some Knowledge Substantial Knowledge Extensive Knowledge

Thank you for taking the time to fill out our survey.

APPENDIX B – SURVEY INSTRUMENT (PORTUGUESE)

PESQUISA SOBRE PRÁTICAS ADOTADAS NA CADEIA DE SUPRIMENTOS QUE PODEM LEVAR À TERCEIRIZAÇÃO

Primeiramente, gostaríamos de lhe agradecer por sua participação nesta pesquisa! O objetivo desta pesquisa é analisar a sua percepção em relação às práticas adotadas na cadeia de suprimentos.

Esta pesquisa vai nos fornecer *insights* sobre como as práticas de gestão da cadeia de suprimentos pode impactar terceirização. Você levará cerca de 30 minutos para responder as questões.

Você poderá notar que algumas questões são bastante semelhantes. Isso é importante por razões de mensuração e não serve para controlar a qualidade de suas respostas individuais.

Por favor, responda cada uma das perguntas abaixo, marcando a opção que melhor representa a sua opinião sobre a respectiva declaração.

1. A empresa espera que eu procure os menores custos.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

2. Me sinto pressionado a buscar os menores custos.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

3. Meu(s) superior(s) determina(m) o custo como objetivo.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

4. Custos com fornecedor nunca mudam.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

5. Os custos com fornecedor diminuem com o passar do tempo.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

6. Os custos com fornecedor aumentam com o passar do tempo.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

Por favor, responda às perguntas abaixo a respeito das práticas utilizadas por sua organização para monitorar os custos da cadeia de suprimentos.

7. Com que frequência sua organização utiliza as reclamações dos clientes como ajuda para identificar problemas de custos dos fornecedores?

Quase nunca Raramente Ocasionalmente Frequentemente Quase sempre

8. As reclamações dos clientes são uma forma barata de identificar problemas de custos dos fornecedores.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

9. As reclamações dos clientes são uma forma efetiva de identificar problemas de custos dos fornecedores.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

10. Com que frequência sua organização utiliza pesquisas de satisfação de consumidor para identificar problemas de custos de fornecedor?

- Quase nunca Raramente Ocasionalmente Frequentemente Quase sempre

11. Pesquisas de satisfação de consumidor são formas baratas de identificar problemas de custos de fornecedor.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

12. Pesquisas de satisfação de consumidor são formas efetivas de identificar problemas de custos com fornecedores.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

13. Com que frequência sua organização utiliza auditorias externas para identificar problemas de custos com fornecedores?

- Quase nunca Raramente Ocasionalmente Frequentemente Quase sempre

14. Auditoria externa é uma forma barata de identificar problemas de custos com fornecedores.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

15. Auditoria externa de fornecedores é uma forma efetiva de identificar problemas nos custos dos fornecedores.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

16. Com que frequência sua organização usa a auditoria interna dos fornecedores para ajudar a identificar problemas com custos de fornecedores?

- Quase nunca Raramente Ocasionalmente Frequentemente Quase sempre

17. Auditoria interna de fornecedores é uma forma barata de identificar problemas com custo dos fornecedores.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

18. Auditoria interna de fornecedores é uma forma eficiente de identificar problemas com custo dos fornecedores.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

19. Com que frequência sua organização utiliza incentivos aos fornecedores (Ex. Divisão de lucros e custos) identificar problemas com custo dos fornecedores?

- Quase nunca Raramente Ocasionalmente Frequentemente Quase sempre

20. Incentivos aos fornecedores (Ex. Divisão de lucros e custos) são uma forma barata de identificar problemas com custo dos fornecedores

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

21. Incentivos aos fornecedores (Ex. Divisão de lucros e custos) são uma forma eficiente de identificar problemas com custo dos fornecedores

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

Responda as próximas questões baseado em como a qualidade da cadeia de suprimentos é percebida em sua organização

22. A empresa espera que eu procure por padrões de qualidade mais altos.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

23. Me sinto pressionado a procurar por padrões de qualidade mais altos.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

24. Meu chefe enfatiza objetivos baseados em padrões de qualidade.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

25. Os padrões de qualidade do fornecedor não mudam.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

26. Os padrões de qualidade do fornecedor diminuem ao longo do tempo.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

27. Os padrões de qualidade do fornecedor aumentam ao longo do tempo.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

Responda as próximas questões baseado na conformidade às práticas de monitoramento da qualidade da cadeia de suprimentos de sua empresa.

28. Com que frequência sua organização utiliza as reclamações dos clientes para identificar problemas de qualidade dos seus fornecedores

- Quase nunca Raramente Ocasionalmente Frequentemente Quase sempre

29. As reclamações dos clientes são uma forma barata de identificar problemas de conformidade da qualidade dos fornecedores.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

30. As reclamações dos clientes são eficientes para identificar problemas de conformidade da qualidade dos fornecedores.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

31. Com que frequência sua organização usa pesquisa de consumidores para auxiliar na identificação de problemas de conformidade da qualidade dos fornecedores?

- Quase nunca Raramente Ocasionalmente Frequentemente Quase sempre

32. Pesquisa de consumidores são uma forma barata de identificar problemas de conformidade da qualidade dos fornecedores.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

33. Pesquisa de consumidores são uma forma eficiente de identificar problemas de conformidade da qualidade dos fornecedores.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

34. Com que frequência sua organização usa auditorias externas para ajudar na identificação de problemas de conformidade da qualidade dos fornecedores?

- Quase nunca Raramente Ocasionalmente Frequentemente Quase sempre

35. Auditoria externa dos fornecedores é uma forma barata de identificar problemas de conformidade da qualidade do fornecedor?

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

36. Auditoria externa dos fornecedores é uma forma eficiente de identificar problemas de conformidade da qualidade do fornecedor?

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

37. Com que frequência sua organização usa auditorias internas para ajudar na identificação de problemas de conformidade da qualidade dos fornecedores?

- Quase nunca Raramente Ocasionalmente Frequentemente Quase sempre

38. Auditoria interna dos fornecedores é uma forma barata de identificar problemas de conformidade da qualidade do fornecedor?

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

39. Auditoria interna dos fornecedores é uma forma eficiente de identificar problemas de conformidade da qualidade do fornecedor?

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

40. Com que frequência sua organização usa incentivos dos fornecedores (Ex. pagamento por desempenho/reembolso dos fornecedores) para identificar problemas de conformidade da qualidade do fornecedor?

- Quase nunca Raramente Ocasionalmente Frequentemente Quase sempre

41. Incentivos dos fornecedores (Ex. pagamento por desempenho/ reembolso dos fornecedores) são uma forma barata de identificar problemas de conformidade da qualidade do fornecedor?

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

42. Incentivos dos fornecedores (Ex. pagar por desempenho/ reembolso dos fornecedores) são uma forma eficiente de identificar problemas de conformidade da qualidade do fornecedor?

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

Responda às seguintes perguntas com base em sua opinião sobre terceirização.

43. As decisões de terceirização de seus concorrentes são consideradas ideais.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

44. Em seu ramo de negócios a maioria das decisões de terceirização são ideais.

- Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

45. Gerentes sentem-se menos responsáveis pela decisão de terceirizar pois seus concorrentes estão terceirizando.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

46. A decisão dos concorrentes em terceirizar induz gerentes a terceirizar contrariando sua opinião pessoal.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

47. Gerentes podem se sentir encorajados a terceirizar devido a regras e padrões organizacionais não declarados.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

48. Gerentes sentem que o fato de seus concorrentes terceirizarem fornece evidências de que é o correto a fazer.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

49. Gerentes terceirizam porque terceirizar é a norma em sua profissão.

- Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

50. Os gerentes se sentem pressionados ou intimidados a terceirizar

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

51. Os gerentes acreditam que a terceirização é a resposta ideal para as incertezas do ambiente.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

52. Os gerentes acreditam que a terceirização reduz os riscos de consequências pessoais negativas.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

53. Os gerentes acreditam que os benefícios da terceirização aumentam à medida que mais concorrentes terceirizam.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

54. Os gestores acreditam que os benefícios de produzir internamente diminuem à medida que mais concorrentes terceirizam.

Discordo fortemente Discordo Indiferente Concordo Concordo fortemente

55. Os gestores acreditam que os concorrentes estão terceirizando de forma otimizada e estão mais bem informados sobre a terceirização.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

56. Gerentes terceirizam para procurar baixos custos.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

57. Gerentes terceirizam para procurar altos padrões de qualidade.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

Por favor, responda às seguintes perguntas com base na forma como o enunciado descreve você.

58. Quando faço planos, estou quase certo de que posso fazê-los funcionar.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

59. Levar as pessoas a fazer as coisas certas depende da minha capacidade; sorte não tem nada a ver com isso.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

60. O que acontece comigo é de minha responsabilidade.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

61. Concluo tarefas com êxito.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

62. Conduzo tarefas sem problemas.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

63. Eu proponho boas soluções.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

64. Prefiro um trabalho onde tenho grande controle sobre o que eu faço e quando faço.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

65. Prefiro ser um líder a um liderado.

Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

66. Eu gosto de ter controle sobre meu próprio destino.

- Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

67. Quando tiver que escolher entre os dois, você preza a moda, e não o conforto

- Discordo fortemente Discordo Não se aplica Concordo Concordo fortemente

68. Por favor indique seu nível de experiência em processos de decisão.

- Não tenho experiência Pouco experiência Alguma experiência Bastante experiência Extensa experiência

69. Quantos anos de experiência você possui na área de compras? _____

70. Quantos anos de experiência você possui no mercado de trabalho em geral? _____

71. Qual o seu nível de escolaridade? Por favor, marque a alternativa correspondente.

- Nível Médio Tecnólogo Superior completo Mestrado Doutorado

72. Qual a sua idade? Até 20 21-30 31-40 41-50 51-60 61-70 71+

73. Qual seu sexo? Feminino Masculino

74. Qual das opções abaixo melhor descreve o ramo de atuação da empresa em que você trabalha atualmente ou trabalhou recentemente? Selecione somente um.

- a) Aeroespacial
b) Automotivo
c) Bens de consumo
d) Alta tecnologia
e) Indústria em geral
f) farmacêutica
g) Outro, favor especificar _____

75. Qual é o número aproximado de empregados da unidade da empresa em que você trabalha atualmente ou trabalhou recentemente?

- 0-250 251- 500 501-750 751-1000 1001+

Por favor faça seus comentários sobre os pontos em que nosso questionário poderia ser melhorado.

Obrigado por dispor do seu tempo para participar do nosso exercício e preencher nossa pesquisa.
Apreciamos seu tempo e colaboração.

APPENDIX C – EMAIL SENT TO ACADEMICS AND SPECIALISTS

De: [GIOVANNI BOHM MACHADO](#)
Cco: [EDILSON RAMOS DIAS \(edilson.dias@prada.com.br\)](#); [CELSO ALMEIDA NEVES \(celso.neves@prada.com.br\)](#); [JOAO MARIO LOURENCO FILHO](#); [UBALDO MARQUES SILVA FILHO](#); [NUNO FRANCISCO BRUNO SARAMAGO](#); [JOSE CARLOS ALVES CORDEIRO](#); [PAOLA FARAH CICALIATI SIMOES](#); [THAIS MANSUR FRUET](#); [BIANCA CRISTINA CANA RODRIGUES](#); [DANIEL FERNANDES ALBUQUERQUE](#); [EDUARDO VINICIUS DOS SANTOS](#); [FANNY SOLANGE BUSATO BATISTA](#); [GERALDO ELIAS DOS SANTOS](#); [GIULIANO LAZZARINI](#); [JORDANA VALDASTRI VOLANTE](#); [JOSIANE MOTA HONORIO GONCALVES](#); [JOSELITO GONCALVES DOS SANTOS](#); [NATALIA DOS SANTOS LEMOS](#); [PAULA VALENCIA DA FONSECA](#); [PAULO HENRIQUE DA SILVA GOMES](#)
Assunto: Validação de Questionário – Pesquisa de Mestrado
Data: sexta-feira, 3 de julho de 2015 13:27:00
Anexos: [Survey.docx](#)
Prioridade Alta

Boa tarde.

Sou aluno de Mestrado na área de Administração e estou prestes a realizar uma pesquisa com profissionais da área de cadeia de suprimentos que possuem alguma experiência na tomada de decisões. A pesquisa será realizada em agosto de 2015 e minha defesa de dissertação deverá ocorrer até o mês de novembro deste ano.

Para isso, elaborei um questionário de 68 questões que medem diferentes tipos de situações (construtos), entre elas:

- Locus de controle: maneira pela qual cada indivíduo controla os eventos que ocorrem em sua vida.
- Bandwagon pressure: pressão institucional e da concorrência para que o indivíduo siga pelo mesmo caminho ao qual os outros estão seguindo.
- Práticas de monitoramento: Formas de monitorar o desempenho dos fornecedores.
- Dinâmicas de custo e qualidade: questões ligadas a custos e qualidade ao longo do tempo.
- Pressão por custos e qualidade: pressão institucional e externa por menores custos e alta qualidade.

Para que este questionário seja eficaz, faz-se necessária a validação do mesmo por especialistas na área, o qual chamamos no meio acadêmico como **Validação de Construto**. Por este motivo, me dirijo a vocês, que são as pessoas mais qualificadas e indicadas para dar impressões e sugestões sobre as questões contidas no questionário.

Gostaria muito da ajuda de vocês para:

- Ler todas as questões do questionário;
- Verificar se entenderam o sentido de todas as questões;
- Efetuar sugestões e críticas para todas as questões, quando houver. Sua contribuição será de grande valia para minha pesquisa.

A intenção desta pesquisa é avaliar o comportamento do indivíduo em decisões onde será necessário optar pela terceirização. Questões comportamentais e institucionais serão levadas em conta.

Desde já, agradeço a colaboração de todos.

Att.

Giovanni Bohm Machado
 (51)9232-3184

APPENDIX D – SKEWNESS AND KURTOSIS RESULTS

(continue)

Variable	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Q1	-1.064	.199	1.679	.396
Q2	-.703	.199	.155	.396
Q3	-.830	.199	.364	.396
Q4	-.288	.199	1.051	.396
Q5	.670	.199	.259	.396
Q6	-.375	.199	-.705	.396
Q7	-.445	.199	-.364	.396
Q8	-.103	.199	-1.072	.396
Q9	-.181	.199	-1.001	.396
Q10	-.128	.199	-.533	.396
Q11	-.408	.199	-1.094	.396
Q12	-.247	.199	-1.403	.396
Q13	-.092	.199	-.912	.396
Q14	.304	.199	-.978	.396
Q15	-.963	.199	.617	.396
Q16	-.401	.199	-.818	.396
Q17	-.307	.199	-1.087	.396
Q18	-.733	.199	-.156	.396
Q19	.438	.199	-1.112	.396
Q20	.127	.199	-1.122	.396
Q21	.044	.199	-1.337	.396
Q22	-.844	.199	2.575	.396
Q23	-.649	.199	-.108	.396
Q24	-.738	.199	1.561	.396
Q25	1.669	.199	5.578	.396
Q26	.576	.199	-.194	.396
Q27	-.179	.199	-.570	.396
Q28	-.527	.199	-.133	.396
Q29	-.602	.199	-.625	.396
Q30	-1.002	.199	.735	.396
Q31	-.328	.199	-.532	.396
Q32	-.711	.199	.064	.396
Q33	-.755	.199	-.158	.396
Q34	-.171	.199	-.590	.396
Q35	-.094	.199	-1.282	.396
Q36	-1.151	.199	.818	.396
Q37	-.469	.199	-.385	.396
Q38	-.750	.199	-.623	.396
Q39	-1.152	.199	.856	.396
Q40	.726	.199	-.184	.396
Q41	.369	.199	-.617	.396
Q42	-.056	.199	-.824	.396
Q43	.082	.199	-.516	.396
Q44	-.121	.199	-1.349	.396
Q45	.286	.199	-1.006	.396
Q46	-.218	.199	-1.164	.396

(conclusion)

Variable	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Q47	-.762	.199	-.560	.396
Q48	-.241	.199	-1.138	.396
Q49	.485	.199	.335	.396
Q50	.282	.199	-.764	.396
Q51	.268	.199	-1.086	.396
Q52	-.006	.199	-1.077	.396
Q53	.028	.199	-1.327	.396
Q54	.058	.199	-1.285	.396
Q55	-.408	.199	-1.058	.396
Q56	-1.206	.199	1.902	.396
Q57	.599	.199	-.967	.396
Q58	-1.372	.199	5.256	.396
Q59	-1.142	.199	1.580	.396
Q60	-.817	.199	2.636	.396
Q61	-.402	.199	5.715	.396
Q62	-1.247	.199	2.010	.396
Q63	-.898	.199	6.125	.396
Q64	-.993	.199	1.538	.396
Q65	-.540	.199	.183	.396
Q66	-.552	.199	2.366	.396
Q67	.738	.199	.008	.396
Q68	-.438	.199	.491	.396