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L'IMPATTO DEGLI ACQUISTI STRATEGICI SUL MIGLIORAMENTO DEGLI
ACQUISTI INDIRETTI

**THE IMPACT OF STRATEGIC PURCHASING ON INDIRECT
PURCHASING IMPROVEMENT**

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Dedication

To my fiancée **Evodine Wouakoue Yoga** without whom I would not have had the sufficient will and motivation to conclude this research work. She has been of great support from the beginning to the end. May this thesis motivate you in keep working on your dreams.

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I would like also to thank my family for the support and encouragements throughout these years of study, my cousin Samuel Zombou by who all started.

Of course, I thank the almighty God for the strength and the protection during these years.

ABSTRACT

This research study aimed to provide some insights to the company to help them to achieve the objective of cost reduction and profit maximization. During these last years, compare to the past, Indirect purchasing has started been considered as key function of the company as well as other business function able to perform a successful objective.

Therefore, the objective of this study was to improve indirect purchasing inside the selected companies in the Marche region in Italy, by using a strategic purchasing. Specifically, we analysed how indirect purchasing improvement (dependent variable) would be possible through supply base reduction, supplier relationship management and organizational communication (independents variables).

The empirical result, base on the sample size which consisted in 30 out of 40 professionals from various division of the company, stated that all the independent variable above mentioned has positive impact in indirect purchasing improvement in the selected companies. Some recommendations for future research are also provided.

Keywords: Indirect purchasing, strategic purchasing, supply base reduction, supplier relationship management, organizational communication.

ASTRATTO

Questo studio di ricerca mirava a fornire alcuni spunti alle aziende per aiutarle a raggiungere l'obiettivo della riduzione dei costi e della massimizzazione dei profitti.

In questi ultimi anni, rispetto al passato, si è iniziato a considerare l'acquisto indiretto come funzione chiave dell'azienda e come altra funzione aziendale in grado di realizzare un obiettivo di successo.

L'obiettivo di questo studio è stato quindi quello di migliorare gli acquisti indiretti all'interno delle aziende selezionate nelle Marche in Italia, tramite acquisti strategici.

In particolare, abbiamo analizzato come il miglioramento degli acquisti indiretti (variabile dipendente) sarebbe stato possibile attraverso la riduzione della base di fornitura, la gestione dei rapporti con i fornitori e la comunicazione organizzativa (variabili indipendenti).

Il risultato empirico, basato su un campione costituito da trenta a quaranta professionisti di varie divisioni aziendali, ha mostrato che tutte le variabili indipendenti di cui sopra hanno un impatto positivo nel miglioramento degli acquisti indiretti nelle aziende selezionate. Sono inoltre fornite alcune raccomandazioni per le ricerche future.

Parole chiavi: Acquisti indiretti, Acquisti strategici, Riduzione della base di fornitura, gestione delle relazioni con i fornitori, Comunicazione organizzativa.

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CHAPTER ONE

INTRODUCTION

Financial crisis of 2008 has brought turbulence in the worldwide market. As consequences, there was price increase and this caused an imbalance between market demand market offer. Therefore, Companies have been started to redesign their approach of the market taking into consideration those fluctuations. Especially readapting in the new arena where to be successful it was crucial to be more efficient and effective than the competitors. In term of efficiency, organization understood how important was to manage all the business function at the same level.

Moreover, we assisted during the last decade of the improvement of some area management due to the evolvement of the market that led companies and managers to change their behaviour in managing those areas by adopting the continuous innovation strategy. Both entrepreneurial behaviour and market orientation reflect an organisation's deeply- rooted beliefs and values in relation to resource allocation to achieve strategic objectives (Liu et al., 2017).

Firms that place a strong emphasis on acting ahead of the competition in anticipation of future market demand are more likely to direct their resources to support the introduction of new products (Mueller et al., 2012). This behaviour might be effective if the focus is placed on the purchasing and supply chain department that decide in term of quality, cost and the time of material that will impact positively in

the new product. Purchasing and supply chain are therefore acting as a support for other function inside the management system, but should act strategically.

Strategic purchasing and supply chain have been considered over the year as the strategic function of the company toward the objective of cost reduction and efficiency (Melek et al., 2015). Strategic purchasing and supply chain can be described as a systematic and integrated approach to the management of all activities and procedures in the supply chain management. Companies will therefore concentrate on finding the most effective procurement and supply activities to ensure that business goals are met in a way that guarantees that profitability and sustainability.

In view of the importance of efficiency and efficiency in modern purchasing and supply, the adoption of a strategic approach in line with globalization is vital to ensuring competitiveness.

The present study investigates how the competitiveness of the purchasing department, more specifically indirect purchasing department of selected manufacturing firms in the Marche region in Italy can be improved.

1.1) Problem statement

The imbalance that the crisis of 2008 have caused in the business environment has reduced the power of bargaining of buyers, due the price increase that occur as a consequences of increase of the price of raw material. Furthermore, instead for the company to focus on the strategies to overcome that disadvantage, attention was put

in activities such as investigation of price variance, price negotiation and so on. It is therefore crucial to investigate in purchasing variables that together with supply chain can improve the indirect purchasing.

1.2) Research design objective

The following chapter of this research will address through a methodological structure the possibility of answer of this problem. For that, the chapter two will present a literature review of all the component of the supply chain going from the definition of supply chain and supply chain management to identify a variable that could be used to achieve the research objective.

Chapter three will present a hypothetical model of indirect purchasing highlighting the relationship between the strategic purchasing and indirect purchasing improvement. The independent variable will be developed in the same chapter.

Chapter four will then present the methodology to perform the hypothetical model stated above, relating the research paradigm and the regression model used for the research objective. Chapter five and six will present the empirical result of the multiple regression analysis and the analysis of findings. Conclusion and limitations will be addressed in chapter seven.

CHAPTER TWO

LITTERATURE REVIEW

2.1) GENERAL SUPPLY CHAIN AND SUPPLY CHAIN MANAGEMENT

The concept of supply chain has been considered from different points of view in different bodies of literature. There are significant increases in a paper related to this concept and most of them are focusing on supply chain configuration problem. One hundred and eleven papers have been identified as dealing directly with the supply chain configuration problem (C., Chandra. J., Grabis, 2016).

2.1.1) Supply Chain Configuration

In the last decade, it has emerged three typologies of supply chain configuration related to the Circular Economics which is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems (Macarthur, 2017). According to (Masi et al., 2017), these are:

- Eco-Industrial Park,
- Environmental and Sustainable Supply Chain or Green Supply Chain
- Closed-Looped Supply Chain.

The Eco-Industrial Park represent the geographical part of supply chain, that aims to close resource flows by horizontal and vertical circulation of waste and by-product of collocated firms and create efficiencies by sharing infrastructure; the first project were implemented in China and according to (Zhang et al., 2010) it has face some

barriers like a lack of necessary supervision and the willingness and ability of firms to share information and cooperate together; so this means that researchers should consider widened analysis in order to gain the advantages of interconnection production system.

The Environmental and Sustainable Supply Chain or Green Supply Chain differs from EIPs because they go beyond the geographical boundaries with the aims of increase efficiency of supply chain. However it remain difficult to implement it because of the highly competitive business environment; so it should be important to determine in which context to invest in order to obtain a profit in the short and long run. That is why (Shahbazi et al., 2016) find out that on the micro-level firms struggle to increase material efficiency because of internal barriers, namely a lack of investment, necessary knowledge and skills, and information-sharing.

Compare to the other supply chain configuration, the Closed-Loop supply chain is not widely analysed in the empirical literature; its principle is based on the effort in the production side to increase the value perceived in the consumer side and extend the principle to the overall life-cycle of the product. But one problem here is designing product offerings that do not engender rebound effects while remaining attractive to consumer (Zink et al., 2017).

To better analyse the configuration problem of supply chain, it's good to understand what are the core tier functions that are making part of its structure; we can cite:

- Facility Location,
- Allocation decisions,
- Capacity,

- Inventory
- Production Planning.

Facility Location and Allocation decisions have a vital role to play in the strategic nature of supply chain networks because they aimed at determining the optimal supply chain structure in order to achieve a good trade-off between prices, efficiency and the availability of products.

Capacity, Inventory and Production Planning are also important aspect of supply chain networks as they aim to minimise the supply chain cost. Generally, the design and management of a supply chain seek to obtain the best global performances so as to achieve the better performance of single link of the chain (Lambiase et al., 2013).

2.1. Supply Chain and (SCM)

All those functions have evolved over the last years into a broader strategic approach to materials and distribution management known as Supply Chain Management (SCM). Several definition of SCM has been offered over the time but none of this is universal. The lack of a universal definition of SCM is in part due to the way the concept of supply chain has been developed (Croom et al., 2000). Despite the difficulties to make an universal definition of SCM, some writers attempts to synthesize the definition of supply chain and then the definition of SCM, they are are (Mentzer et al., 2001):

- A Supply Chain is a set of three or more entities directly involved in the upstream and downstream flow of products, services, finances, and information from a source to the customer.
- Supply Chain Management is the systematic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purpose of improving long- term performance of the individual companies and the supply chain as a whole

Most recently, (Henk et al., 2019), provide a definition of supply chain and supply chain management base on the American Council for Supply Chain Professionals (CSCMP), which is:

- Supply chain encompasses all activities needed to convert raw materials into final product, from sourcing through component manufacturing and final assembly to distribution to end markets and including all necessary materials handling and storage activities.
- Supply chain management encompasses the planning and management of all supply chain operations, including the coordination and collaboration with channel partners that can be suppliers, intermediaries and customers.

Therefore, based on these recent definitions we can say that, supply chain and supply chain management are integrated and are composed by all other functions such as logistics, distribution, warehouse and purchasing.

2.2. (SCM) evolution

SCM concept was unknown during the 1950s and 1960s because firms counted on their own internal technology and capacity with the main objective to increase production. Sharing technology and expertise with customers or suppliers was considered too risky and unacceptable (Tan K., 2001), with the introduction of Manufacturing Resource Planning (MRP) in 1970, many companies discovered how huge were the manufacturing cost, the new product development cost, the quality and delivery time cost. This led them to change their approach and to enhance the way to manage.

Between the 1980s and 1990s, as a consequence of the introduction of MRP, and the increased customer satisfaction, companies faced continuously increased demands for better, faster and cheaper logistical services. As a result, many manufacturers outsourced logistics activities and their focus transferred to core competencies that allow them to achieve the productivity and efficiency goal (Daugherty, 2011).

During the 1990s we assisted in the introduction of Enterprise Resource Planning (ERP), which enhanced the relationship between Buyer and Supplier and then increased the SCM performance. While Electronic Data Interchange (EDI) systems were

concerned mainly with inter-organizational integration, ERP systems were concerned mainly with intra-organizational integration (Movahedi et al., 2009).

The implementation of trade liberalization policies and the creation of institutions such as the

World Trade Organization (WTO) and other international organizations dealing with global or regional trade policies, companies started moving over the national boundaries. This was also motivated by the fact that firms became bigger than they used to be and feel comfortable to compete internationally. The new trend is called Global Supply Chain Management (GSCM). In the developed economies, there is a switch from firm-firm competition to chain-chain competition (Morgan and Monczka, 1996).

In the next subsection of this chapter will present other literature about the function integrated in the supply chain management as mentioned above.

2.2) LOGISTICS

Logistics is the term used to explain the integration between production and distribution through information received from customer to supplier. There are several definitions of logistics but we will focus our attention on the basic definition of this concept. Before the definition, we should highlight some frequent questions made around logistics by managers such as:

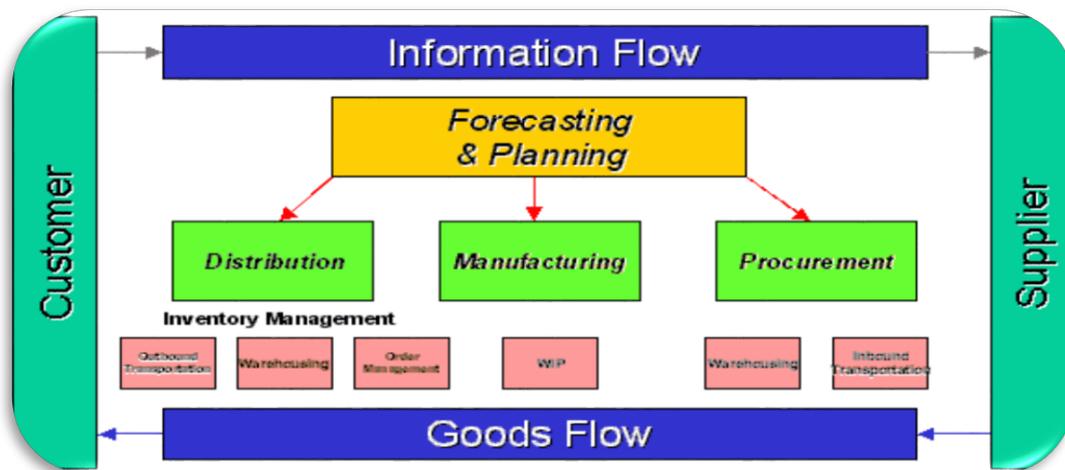
- Is it profitable to serve the customer in that country with our product?
- In which plant and in which country should we manufacture this product?

- How should we distribute this product and what transportation mode should we use?
- What is the tactical production plant and how much inventory of which product should we store where?
- What vendors in what countries should we use for this product?
- What is the ecological way to comply with environmental regulations on recycling at our disposal?

According to (Goetschalckx et al., 2002), too often the answers to these questions are given without much systematic investigation but rather based on previous “intuitive” knowledge. He continued saying that what most companies need is a comprehensive methodology and engineering design method that allows them to rapidly prototype and evaluate several logistics chain configurations.

In addition, the focusing for the companies on the production, logistics, marketing, sale network control, after sale service and other infrastructure activities lead to increase the value of product or service offered in the final market (Marcone, M. R., 2012). It is then crucial to analyse deeply the logistics impact in the company objectives which aims is to reduce the production cost. So the logistics should be consider as a link between market and company. We can summarize the logistics system in the figure below:

Figure 1. Logistics system



Source: Hands-on Management Consultants, Inc., 2000.

2.2. Definition of Logistics

According to the American Council for Supply Chain Management Professionals (CSCMP), Logistics refers to the transportation and storage of materials; parts and products in supply chain (Henk et al., 2019). With this definition we can understand that logistics include the overall movement of goods, inbound and outbound process to and from warehouse.

Logistics include also the information transfer between various stage of supply chain and the execution of some service; inbound and outbound processes to and from warehouse, as well as internal and external materials handling and transport operations (Henk et al., 2019).

2.3) Logistics Management and Supply Chain Management

Logistics management is that part of supply chain management that plans, implement, and control efficient, and effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers requirement (Henk et al., 2019).

Base on this definition we can confirm the important relationship existing between these two functions. Moreover the logistics management should not be considered only as a transport function like it is unfortunately presented by journals but as an integrated function. That is why (Henk et al., 2019) said that logistics operations depend on and has impact on sourcing and procurement, production planning and scheduling, packaging and assembly.

We will provide a literature regarding the warehouse that also an important function of the company.

2.3) WAREHOUSE

Warehouse appears during the last years to be a strategic aspect in the company's management in order to increase efficiency. Several papers have been developed around the warehouse concept with a huge number of innovative solutions model to solve the warehousing problem that have been classified into three big models:

- The Design,
- Throughput Capacity

- Storage Capacity.

For the design, the main issues faced in designing the warehouse system by the warehouse designer are storage problem such as block stacking, deep lane storage, retrieval system and automated storage and so on, based on the aim of improving the warehouse layout and enhance the handling equipment choice (ASHAYERI et al., 1985).

Moreover, there are other issues linked to the questions such as rack orientation, space allocation, and external building configuration that are also making part of warehouse Design model. The model address an internal arrangement and external configuration, including the orientation of storage racks, the number of aisles, and the allocation of scarce storage space among competing uses in the internal arrangement side and optimizing the external configuration (Eldon A. Gunn, 1992).

The Through Capacity model is comprised of picking policies, batching policies, storage assignment policies, as well as dynamic control models (Eldon A. Gunn, 1992). A deep attention has been paid by organizational research literature on this model, in particular on storage assignment policies, in which incoming items should be suited, the available storage locations. The objective functions assumed in the analysis of these policies include reducing the costs of material handling. About the Batching policies, researchers noticed that it also contribute to the objective of maximisation of throughput.

Storage capacity model find the optimal warehouse size or else maximize space utilization, minimizing the total discounted cost using a method of maximizing the utilization of space storage like pallet unitization and block stacking (Eldon A. Gunn, 1992).

Due to the increase of complexity in the logistics and supply chain networks, warehouse has been recognize to occupied a strategically role and its performance became an important issue to help manager make decisions consequently using some tools and techniques (Dolgui and Proth, 2010).

We will analyse the distribution function and the related literature that has been produce in regarding.

2.4) DISTRIBUTION

Product distribution represent on of important aspect for the company because it impact directly in its organizational performance. Distribution refers to the steps taken to move and store a product from the supplier stage to a customer stage in the supply chain (Chopra S., 2003). This led us to understand that distribution impact directly the supply both supply chain and customer experience thus is then considered as a key driver of the company profit. Moreover, Selecting the right combination of metrics to monitor and manage distribution is a challenge for even the most performer company and it is not getting easier.

Based on the supply chain objective, each company adopts a different type of distribution network that allows them to reach the highest-level performance. There are some factors that affect the distribution network design, then help to value the overall performance of the distribution network; these are (Chopra S., 2003):

- Customer needs that are met
- The cost of meeting the customer needs

These two factors shall decide the profitability of the distribution network and this is conditioned by the expectation of the customer which is sometimes very high according to the dimension such as response time, product variety, product availability, etc.

Moreover, there might be some added cost that the company could face if it changed the distribution network such as the inventory cost that increases when it increases the number of facilities in the supply chain, or in the case of transportation where increasing the number of facilities leads to a decrease in transportation cost only if the inbound transportation economy of scale is maintained. The company is going to make these two following questions in order to decide the option of distribution network design (Chopra S., 2003):

- Will the product be delivered to the customer location or picked up from a preordained site?
- Will the product flow through an intermediary (or intermediate location)?

Many firms are well served by a combination of distribution networks, but it is important to consider product characteristics as well as network requirements when

deciding on the appropriate delivery network thus the combination used will depend also on the strategic location of the company.

There are six different distribution networks that based on the company decision, each of them with its strengths and weaknesses, these are (Chopra S., 2003):

1. Manufacturer storage with direct shipping.
2. Manufacturer storage with direct shipping and in-transit merge.
3. Distributor storage with package carrier delivery.
4. Distributor storage with last mile delivery.
5. Manufacturer/distributor storage with customer pickup.
6. Retail storage with customer pickup.

Distribution as presented is then impacting in both material shipping toward our customers as well as material received from our suppliers after having an purchasing order. The next section will therefore analyse the purchasing functions of the company base on some literature review.

2.5) PURCHASING

2.5.1) Definition

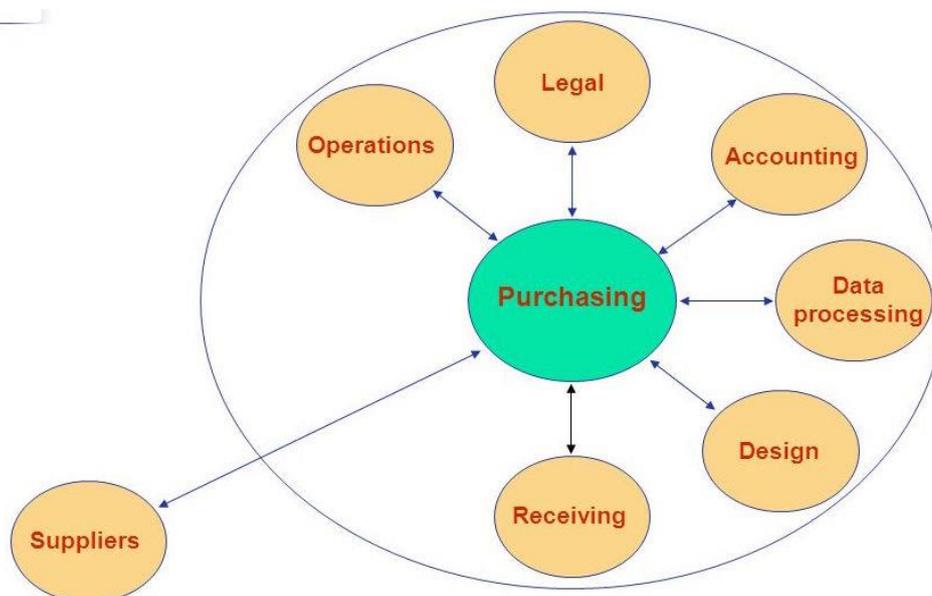
Purchasing involves satisfaction of individual firm's requirements; it has been always considered as a very important function inside the company. Firstly by (Fayol Henri) who is an important figure of management, he present purchase as a sub-function of commercial function because of the fact that it served to buy and most importantly and to sell; then (Porter M.) another important figure in economy present

purchase as a support function in the value chain, and will few years later confirm it like a strategic function of the company (Poissonier, 2017).

2.5.2) Objectives

The key function of the purchase is to procure materials and parts required to manufacture goods or to make services. Its goal is to develop and implement purchasing plans for products and services that support operational strategies (Stevenson, 2002). Purchasing is a management activity providing an interface between the functional areas of a company and its suppliers, as illustrated by (Stevenson, 2002) in the *figure 2*.

Figure 2: Purchasing interface



Source: (Stevenson, 2002)

In the figure:

- Operations unit is the main source of material requests for production. To ensure that production goals are achieved, the interface between purchase and the operating unit of the company is essential.
- The interface between the purchasing department and the legal department of the organization ensures that prices and legal terms are clearly understood when purchasing contracts are negotiated.
- The accounting department pays suppliers for goods and services, tracks inventories, reviews invoices and helps track the performance of vendors;
- The department of design and engineering prepares material specifications and communicates those specifications to order and procurement ensures that all suppliers comply with the specified requirements;
- Receiving inspections of incoming shipments for adherence to defined quality and quantity.
- Suppliers collaborate with purchasing to assess the material requirements of the organization and how to fulfil them efficiently.

2.5.1) Purchasing evolution

The evolution of purchasing started during the years 1945s and 1975s, due to the mass production together with the mass consumption, companies were able to control the market price so they were “price maker” and the cost were regarded as a data and not a constraint. The purchasing function was administrative and not strategic (Thawiwinyu & Laptaned, 2009).

Around the 1970s, the entered in the in advanced communication, information processing and transportation technology with the technologic revolution then market evolve and turnout to be a “market economy” instead of “production market” as before. These changes strengthened the manufacturing-purchasing interface and created a need to align the purchasing cycle with production requirements. Furthermore, purchasing was enabled to assume a more proactive role in organisations by being involved in product design and development activities (Thompson, 2001).

Moreover, globalization of market also contributed to in changes in purchasing; the major driver of globalisation was the deregulation of trade barriers in a form of high tariffs on imports of manufactured goods. The aim of the trade barriers was to protect domestic competition. The deregulation thus encouraged international trade, which is the exporting of goods and services to customers in other countries with low cost, which makes their product prices more competitive and led to more effective supply chains (Hill, 2009).

In order to remain competitive and gain competitive advantage, organisations had to align themselves with global counterparts by implementing world-class standards in their processes. The effect has been true of the purchasing function, whereby the emergence of foreign direct investments (FDI) has resulted in some purchasing personnel transitioning from being local buyers to regional buyers in the case of multinational companies.

2.5.1) Role and importance of purchasing

Purchasing's role and importance is reflected in its emphasis, its place in the value chain and how it leverages the value chain. The pivotal role of the purchasing function is to efficiently manage an organisation's external resources in a manner that ensures that the supply of all goods, services and capabilities that are required for operating the organisation are acquired at a favourable cost and required quality standards (Van Weele, 2005).

Therefore, purchasing encompasses all activities that are aimed at determining the scope of supply including management of relationships with suppliers and internal stakeholders to ensure that the organisation remains competitive; according to (Telgen, J., 2001), It also links suppliers to their customers by ensuring that competent suppliers who are able to meet the organisation's needs in a cost effective manner and within a specific lead time are selected to effectively fulfil that scope.

Purchasing managers are aware about the complexity of managing purchasing activities, because they should deal with the direct purchasing and indirect purchasing which are the two main part of this function.

2.5.2) Purchasing as a strategic function of the company

Purchasing as strategic function refers to an approach of purchasing where buyers build mutually efficient and long-lasting relationship with other member of the supply chain. On the other hand, with this approach company view their supplier as partners instead of commodity providers. This is of great importance to manufacturing firms, as a great portion of their revenue is channelled towards purchasing raw materials and other goods and services that are required in the manufacturing process (Thawiwinyu & Laptaned, 2009).

2.5.3) Purchasing Management and Supply Chain Management

Purchasing management as a discipline or business function has changed extensively and has over the years been viewed with a greater level of interest in most organisations due to being recognised as a key success factor in the attainment of strategic objectives (Kalenga & Brent, 2005).

According to (Kalenga & Brent, 2005), the increased interest in purchasing can be attributed to the fact that organisations have come to realise that the purchasing function has an impact on their competitive position, as it controls a significant portion of corporate expenditure.

Purchasing and supply managers are increasingly realising that their competitiveness depends on resource optimisation. The purchasing function has therefore been reengineered from its traditional and transactional division to a team of material coordinators and supply managers or specialists.

2.6) Direct Purchasing

Most firms tend to split their purchasing and supply departments into production purchases and non-manufacturing purchases or direct and indirect purchases. Direct purchasing involves the purchase of direct material requirements, which are used in the production processes of manufacturing organisations (Van Weele, 2005). In the past, when analysing expense reports and budgets, organisations focused on direct material costs – actual units of production, which constitute direct material and direct labour costs, as they account for the major part of the expenditure (Benton, 2007).

- Enterprise resource planning (ERP) and Material requirements planning (MRP)

In order to schedule purchases, businesses rely on Enterprise resource planning (ERP) and material requirements planning (MRP) programs. An ERP system is a business software system, which automates and integrates an organisation's functions, allowing them to share common data and access real-time information in the other hand, An MRP system is a software application which analyses the internal condition of an organisation and provides reports on production and purchasing requirements for a given period. The aim of an MRP system is to ensure the

availability of content, components and products for planned production. In addition, an MRP system seeks to maintain the most economic inventory levels and plans production activities, delivery schedules and purchasing activities (Madapusi, A., 2008).

The purpose of direct purchasing is basically to ensure continuity of supply of raw materials to support production. Direct purchasing criteria are specifically related to manufacturing and explicitly defined in a “bill of materials”. A Bill of Materials (BOM) determines which assemblies, subassemblies, parts, and raw materials are required to produce finished product units. For example, the “BOM” of a car manufacturer would clearly illustrate the list and the quantities of all the components such as tyres, doors and axles needed for each car's production (Stevenson, 2002).

2.7) Indirect Purchasing

Indirect purchasing is the procurement of goods and services related to production but not necessarily part of the finished product. Indirect purchases include the purchase of maintenance repairs and operations requirements, capital equipment, machine spares and production related consumables (Caridi et al., 2004). Other indirect purchasing category expenditure items are office furniture, office consumables, professional services, IT hardware and software, travel, sales and marketing and training services (Caridi et al., 2004).

Many low-value criteria, a more dynamic environment for customers and a number of suppliers are the factors that distinguish indirect purchasing transactions from the direct purchasing. The climate for the stakeholders is complex, involving a number of departments with specific requirements. Moreover, Indirect purchasing requirements do not have a bill of materials “BOM” as direct purchasing and each purchase has its unique nature.

Indirect purchasing expenditure accounts for over 60% of non-manufacturing organisations’ expenditure on third parties. In the financial services sector, it accounts for more than 90% and over 50% in manufacturing organisations (Rycraft & Bosch, 2010). For this, Companies must adopt strategic approaches for managing these expenditures effectively.

2.7.1) Challenges

The method of acquiring indirect buying requirements is markedly different from the direct requirements acquisition. Direct purchases are easier to handle than indirect, as

big corporations such as General Motors, tend to negotiate agreements with suppliers with specific volume commitments prior to embarking on new vehicle programmes (Tuteja, 2004).

According to (Tuteja, 2004), indirect purchasing face the following challenges:

- Lack of indirect purchasing spend visibility renders it difficult for buyers to extract or quantify the exact indirect purchasing expenditure. The lack of visibility can be attributed to most quotations being based on one-time buys, with no repeat purchase commitment
- Lack of the resources and clear strategy to source indirect requirements
- Indirect purchases tend to be decentralised, which infringes upon volume discount opportunity.
- Most of the requirements tend to be low value requirements and once-off requirements, which limits the bargaining power of purchasing personnel. As cost saving has traditionally been one of the measures of purchasing personnel performance, the low-value nature of indirect purchases makes the attainment of cost savings difficult.
- One of the characteristics of indirect purchasing is a large number of suppliers.
- Buyers tend to experience difficulty in managing large numbers of suppliers in the absence of adequate breadth of internal category management expertise.
- Organisations have different indirect purchasing systems, processes and interfaces.

2.7.2) Indirect purchasing improvement

Base on the challenges highlighted above, it is then important for the company to start thinking of the improvement of indirect purchasing and considering it as an important business function as well as other division that are part of its strategy.

Organization should therefore, create a tool that could help to valued the effectiveness of the overall purchasing department and more specifically indirect purchasing. To better improve the indirect purchasing and achieve the objective of efficiency, firm should focus on the following aspect (Alvarez, 2010):

- Partnership philosophy: This entails adopting a win-win negotiating philosophy with suppliers. Purchasing should seek to establish long-term relationships with suppliers to ensure mutual economic gains.
- Supply base reduction: To successfully implement strategic purchasing initiatives, buyers should focus on reducing the supply base and move away from having too many suppliers for the same commodities
- Fact-based negotiations: When applying purchasing best practices, insight gained from market analysis should be used to the buying company's advantage during negotiations with suppliers. Insight pertaining to market performance, competitors, new products, substitute and complementary goods could strengthen the buyer's bargaining position.

In the present research study, indirect purchasing improvement is presented as a function that can optimize purchasing department efficiency. This can be done by managing aspect as supply base reduction, supplier relationship, internal and external communication. The study suggests therefore that this function could be improved focusing at the above aspects.

The next chapter discusses the theoretical foundation for the hypothesised model to improve indirect purchasing using strategic purchasing in the company strategies.

CHAPTER THREE: HYPOTHETICAL MODEL OF INDIRECT PURCHASING COMPETITIVENESS

INTRODUCTION

In this chapter, we will present the hypothesised model choose to supported our research objective, highlighting factor that according to us were significant in order improve indirect purchasing. This was based on the fact that many organisations still use old systems and their purchasing departments are still administrative and operational; without having a real strategy approach in purchasing. Moreover, over the years, there have been several economics situation that influenced the market such as financial crisis, inflation, raw material price fluctuation, and so on. In addition to that there is an increase in the market completion, with an increasing number of suppliers and customers, then this has led many company to adopt a strategic purchasing.

3.1) Indirect purchasing and strategic purchasing relationship

Purchasing is been recognized more and more these last years and is seen as a strategic instrument for driving efficiency. It should therefore be incorporated into the corporate strategy to ensure that a competitive advantage is achieved. Organizations should ensure that structures are in place to reduce costs, improve efficiency, improve business and functional performance and eliminate non-value-added activities. Therefore, the organizational emphasis should be on the most effective means of purchase and provision for the achievement, feasibility,

sustainability, and competitiveness of corporate objectives, especially indirect purchasing.

Although indirect purchases represent up to 80% of the purchasing volume of most organisations, their management has not been treated as a high priority item, this results in lost saving opportunities. Organizations need to have a balance of processes, technology and cross-functional expertise to remain competitive and take advantage of indirect expenditure.

A strategic purchasing emphasis will allow companies to stand out in an increasingly competitive and global market. In order to improve effectiveness and competitiveness on indirect purchasing, companies should identify some variable that are able to led them into achievement of the above objectives; the following are strategies that organizations might be use and this will represent the basis of our model for this research:

3.1.1) Supply Base Reduction

The role of purchasing in supplier integration is critical, as purchasing scans the environment to identify the most suitable suppliers (Laptaned, 2009). Changes in the market trends, changing buyer patterns and increasing need for reliable supply networks have led organizations to devise strategies for better supply management. An organisation's supply base is the list of suppliers that an organisation uses to acquire its materials, equipment, services and supplies (Wisner, 2009).

To stay competitive, while benefitting from closer long-term partnerships, buying companies need to decide strategically about how many suppliers to retain for the different product categories. How an organisation decides on its supply base impacts on performance as supply chain design represents the ultimate core competency. An organisation is as good as its supply base, since a poor supply network can cripple an organisation's ability to compete effectively in the market place (Ogden, 2006).

Organizations are now adopting a reduction in supply base as a strategic tool in supplier relation management in purchasing perspectives. The explanation for the supply bases is that when fewer vendors are involved, the importance of buyer or seller ties and output becomes easier to increase. Supply base reduction policies have a positive impact on business operations as they narrow down the number of suppliers to those who best meet organisational requirements (Laptaned, 2009).

According to (Ogden, 2006), company should follow these following in other to enjoy benefit in reducing their supplier base:

- Increased access to technology and innovation: Reduction of supply bases promotes transparency, ensuring that the purchasers' organization communicates openly with suppliers. The maintenance of close contacts with fewer suppliers allows all parties involved to tap into the technology of each other. Visits and discussions of providers can share a wealth of information on market performance, trends and new products.

- Decreased supplier management costs: Smaller purchasing orders and contracts to be signed make the management of a smaller supply base simpler than a bigger supply base. The process of provider performance management is also simplified and development costs are reduced. Ordering in a way that keeps the supplier's costs low, and focuses on the best overall costs and on the agreement with suppliers also encourages good relationships.
- Increased efficiency: The reduction of supplies base improves effectiveness as customers negotiate with less suppliers, while tailoring supplier growth activities to less suppliers ensures optimum allocation of resources.
- Increased productivity of purchasing employees: Since the supply base reduction means that more energy and resources are channelled into more strategic activities rather than labour intensive and time consuming operations, buying people may become more competitive.
- Reduction in inventory levels, delivery and transportation costs: Contracting with fewer vendors encourages efficiency and can lead to the quality of material supply. Purchaser and supplier organisations, which hold the inventory at the purchasing organisation's premises at the supplier's expense, which enter into consignment stock agreements. If the inventory has been given, it will never be reported and paid on stock in the books of the company.

In addition, another analysis was made by (Song et al., 2013) in order to provide some strategies that management might use to perform efficiency in their relationship with the remaining supplier selected in the base of the capability. The might have as result:

- Higher delivery capacity, due to the fact that reducing the supplier base size, it increases the delivery efficiency of suppliers.
- Short time and more reliable delivery service, due to the fact that reducing suppliers base size led to improve reliability and delivery time of the suppliers
- Improvement of order processing services, as consequence of supplier reduction base, which would also lower the fix ordering cost.

3.1.2) Organizational Communication

This section of our research deals with the importance of communication inside the company, and explains how company can use communication to achieve important goal. Most organizations nowadays believe on the community spirit as an important aspect in the coordination of the employee activities. According to (Ridder, 2004), from the managerial perspectives, it is important not only to engender a positive general spirit, but also to ensure that this spirit falls in line with the organisation's goals and mission.

Organizational communication as the exchange of information between two or more people in an organization, where sense is created in order to influence behaviour or

to relay a message (Bagraim et al., 2007). It is an organisation's phenomenon, which acts as a portal or medium through which staff shares knowledge, create connections and build a culture and values.

Without efficient and appropriate communication structures, no community can work, because the form of communication produces the expected result (Bagraim et al., 2007), Effective and efficient communication processes ensure policy delivery, team spirit and collaboration, and provide the employees with strategic guidance. For relationship building, support in improving organizational skills and helps individuals and groups organize activities and achieve goals, departmental and interdepartmental Contact is crucial.

In the purchasing perspective, we can say that Effective communication between buyers ensures that members develop their own skills, abilities and expertise to achieve functional goals. Communication requires that purchase policies and appropriate actions are made clear and explained. For example, the procurement policy should make the procurement process clearly known, set the authority rates in relation to order value, and define the rules on gifts and annuity from suppliers.

3.1.3) Supplier Relationship Management

Purchasing has been seen as a non-strategic function of the company. The fact that company aimed was to realise short term cost reduction, to be effective by playing suppliers against each other on price offering, put some limitation in their possibilities to gain information that they were lacked. Suppliers constitute for the

company an important provider of resources such as technology, skills, and knowledge. According to (Mitrega et al., 2017), Successfully managing supplier relationships, including overall supply portfolios, has been shown to increase the purchasing and manufacturing efficiency of firms by streamlining resource acquisition and optimizing operational costs.

This vision has change nowadays and firms start understanding the importance of long-term relationship with supplier in achieving high and efficient goals. The buying organizations and their supply companies tend to work together for long-term mutual gains instead of pursuing short-term benefits at each transaction. This was achieve thanks to (Mitrega et al., 2017), who define supplier relationship management (SRM) as the systematic management of an organisation's relationships with its suppliers in a manner that optimises the value that is delivered to the organisation by its suppliers.

Moreover, the following has been identified as main drivers factors of supplier relationship (Van Zyl, 2005):

- **Asset/Cost efficiency:** Organisations pursue (SRM) due to the mutually beneficial cost reductions that can be yielded. An evaluation of how the relationship can best optimise resources enables the buying organisations and their suppliers to reduce channel costs such as distribution costs, product and information handling costs, improve asset utilisation and reap the benefits of increased pooled managerial efficiencies.

- Customer service: (SRM) is an enabler of improved customer service levels, which contributes to an organisation's differential competitive advantage. Improved on-time delivery, paperless order processing, accurate order deliveries, improved cycle times, improved fill rates, and process improvements are customer service factors that drive SRM.
- Marketing advantage: The prospect of marketing advantages such as joint advertising and sales promotion as well as reduced competitor price advantage drives the (SRM) focus. The cost savings yielded by the relationship can be translated into price reductions for customers. In addition, joint product development, co-branding opportunities, increased geographic coverage market saturation and access to the latest technology foster (SRM).
- Profit stability/growth: (SRM) can lead to profit growth or reduced profit variability profit, as joint strategic planning between parties could contribute towards sustainable growth, market share stability and increased sales volume

In addition (Mitrega et al., 2017), suggest the concept of network capability to capture some dynamics as supplier relationship management capabilities can help to improve the supplier relationship. Network capability implies that the focus of innovation success is situated within the network or portfolio of firms' business relationships rather than in any single partnership, because every partnership may sooner or later lose its rent-generating function (Mitrega et al., 2017).

Technological advancements automate critical areas of supplier relationships such as relationship creation, execution and management of orders as well as relationship sustenance. Automated solutions enable buyers to perform adequate SWOT analyses to determine which suppliers to do business with (Van Zyl, 2005).

CHAPTER FOUR

METHODOLOGY

Introduction

This chapter provides an overview of the general research methods and outlines the broad methodology that was followed in the empirical study. It constitutes an explanation of the applied research methodology including the research paradigm, the sample and so on.

4.1) Research paradigm

Research should be thorough rigorous, systematic and address a specific issue (Khaldi, 2017). The methodology used for conducting research should therefore be given careful attention. Research methodology, also known as the research paradigm, refers to the overall approach to the research process and how research is viewed with respect to how data is collected and analysed (Khaldi, 2017).

According to (Khaldi, 2017), There are two main research paradigms that can be used for research data collection purposes. They are positive (quantitative) and phenomenological (qualitative) paradigms. A positivistic paradigm is used to answer questions concerning relationships and correlation between measured variables in order to explain, control and predict phenomena. Hypotheses between two or more variables are formulated and quantitative research leads to a confirmation or disconfirmation of the tested hypotheses.

Positivist research is focused on and produces objective evidence through questionnaires, focus groups, interviews and tests to establish facts and cause phenomena. According to (Khaldi, 2017), we should as a panel of persons led by trained moderators who meet for a certain period and exchange ideas, feelings and opinions on specific issues. Positivist data are considered to be objective and are linked to a more traditional and scientific approach to research as information can be quantified.

A phenomenological paradigm seeks to explain the experiences, viewpoints and understandings of individual circumstances of people. It is based on the belief that the ability of the researcher to interpret and make sense of what he or she sees is critical to the understanding of any social phenomenon. In this type of research the researcher aims at understanding how individuals' lives are organised and structured (Khaldi, 2017).

In seeking to improve effectiveness and understand people's perceptions on the subject of study as well as determine whether a relationship exists between the dependant variable and independents variables mentioned above, the triangulation method was selected for the research study, this because research study will use some aspects of both the positivistic and the phenomenological methods.

4.2) SOURCE OF DATA

4.2.1) SAMPLE

Convenience sampling was used in the empirical study to select 30 out of a possible 40 purchasing, supply chain practitioners and individuals from other department in the manufacturing industry in the Marche region in Italy. A mail survey, in a questionnaire format, was conducted for all forty purchasing, supplies chain practitioners and other professionals from twelve manufacturing companies. But due to the covid19 crisis, the selected companies have been reduced the number of worker, and some other was working from home. This had as consequence the limitation of the number of participant. Another limitation was due to the unwillingness of the participant to respond on the questionnaire.

We received back 25 responses of questionnaire from the selected companies, corresponding to a response rate between the interval (60% - 85%). The figure 5 below depicted what we just said.

FIGURE 5: Questionnaire response rate

The respondents were people from various area of the company such as Buyers, engineers, and commercial, this because we wanted to get an overall idea of the lives inside the company by each person of the personnel.

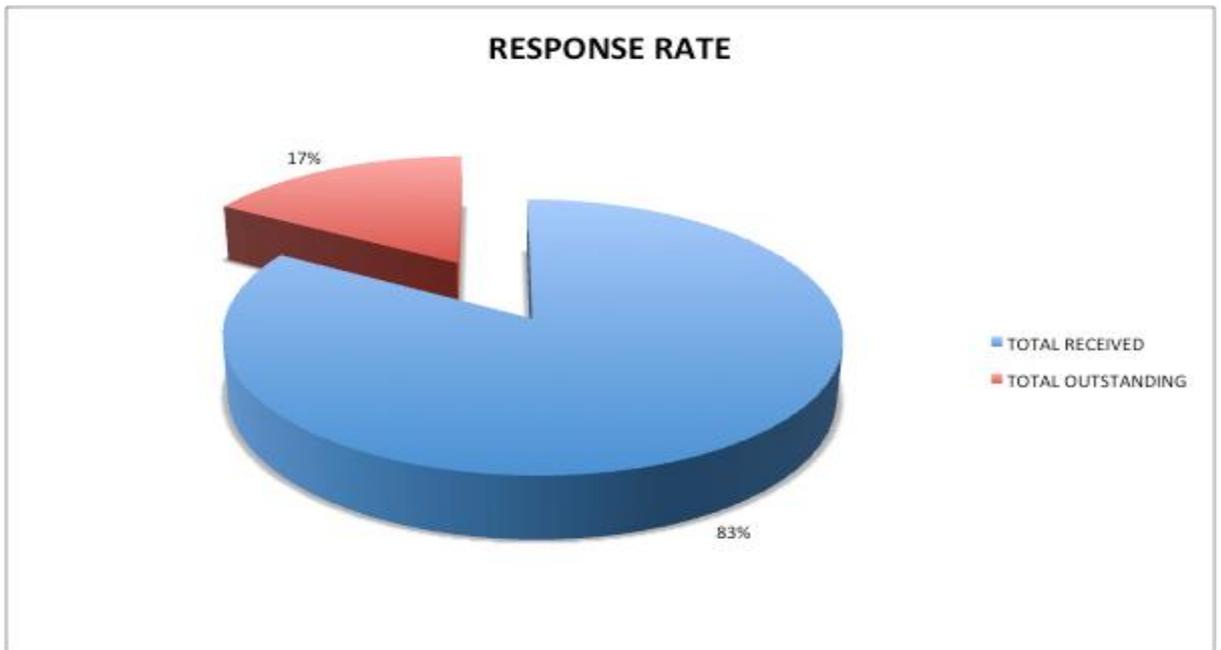


FIGURE 6: Response by gender

It shows that 44% of responses were female and 56 of responses were male. This is another way that confirms how women are able to apply in every department of the company compare to the pass where they were discriminated in the job environment. It is also due to the emancipation of women during these years through their claims.

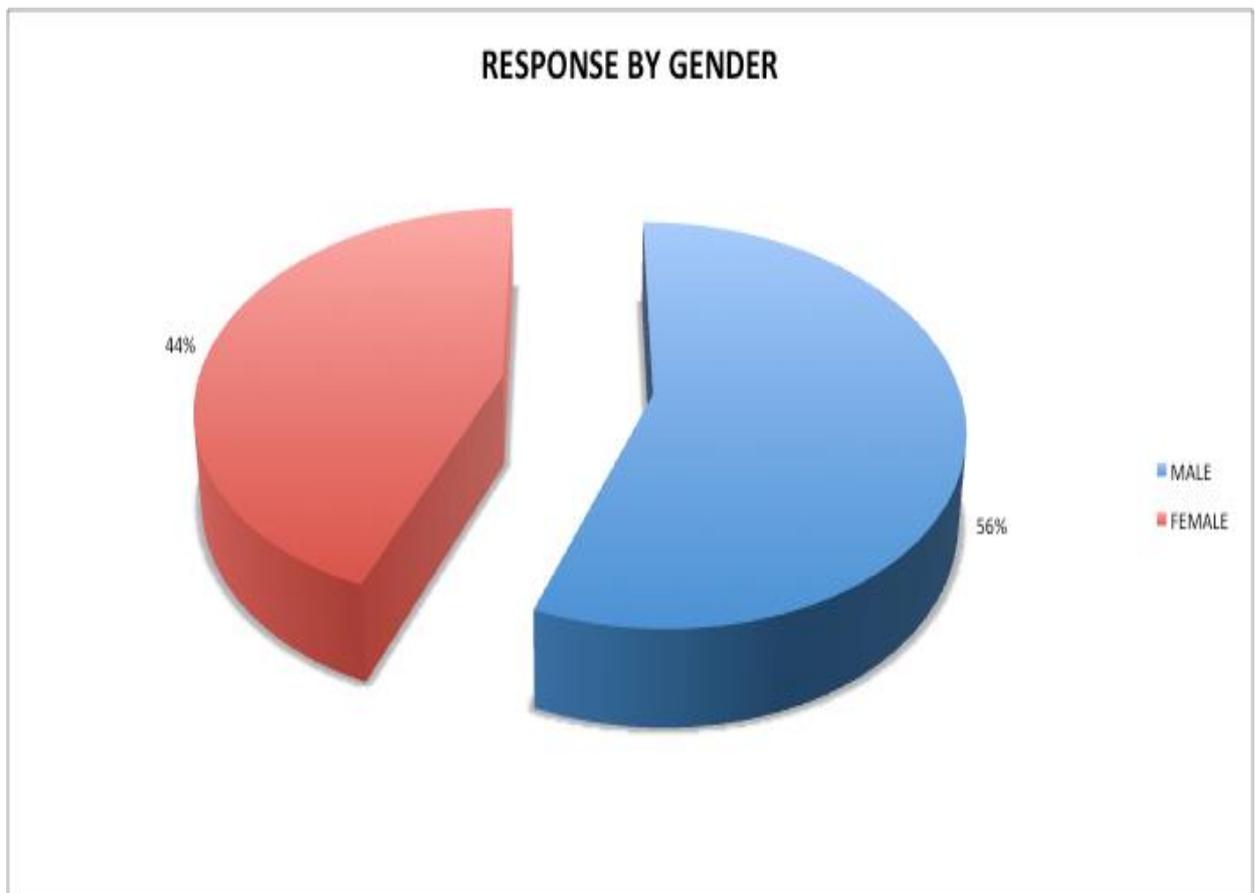


TABLE 1: General composition of the sample

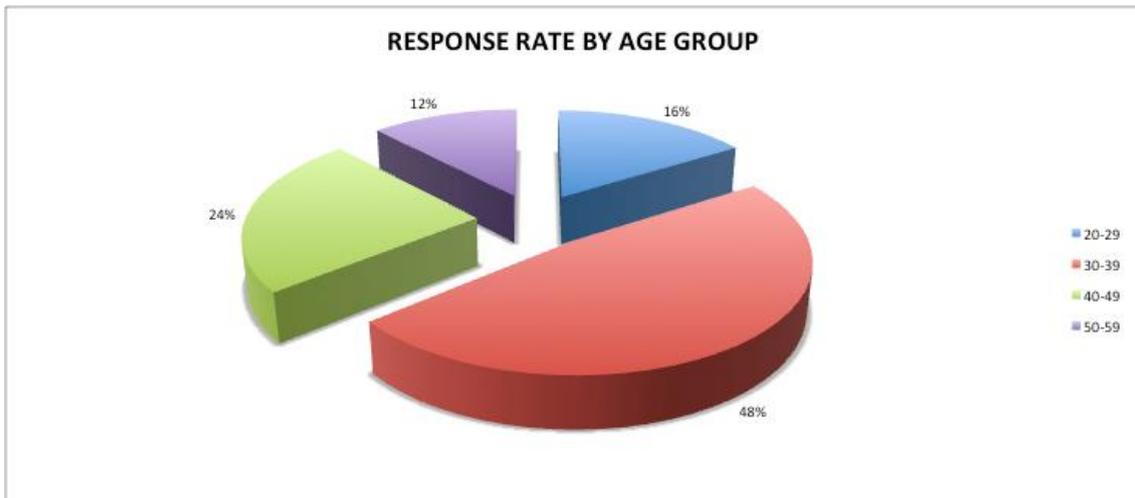
The table show that 72% were Italian speakers, 5& were French speaker and 20% were English speakers and 8% were French speakers. This also gives us good information about how the Marche region is multicultural inside the company. Have people from different culture inside the company brings some important advantages to the company, for example when they are dealing with some suppliers from the country of origin of one of the personnel member.

| GENDER | NUMBER OF RESPONSE | PERCENTAGE OF RESPONSE |
|------------------|---------------------------|-------------------------------|
| MALE | 14 | 56% |
| FEMALE | 11 | 44% |
| TOTAL | 25 | 100% |
| LANGUAGE | NUMBER OF RESPONSE | PERCENTAGE OF RESPONSE |
| ITALIAN | 18 | 72% |
| ENGLISH | 5 | 20% |
| FRENCH | 2 | 8% |
| TOTAL | 25 | 100% |
| AGE GROUP | NUMBER OF RESPONSE | PERCENTAGE OF RESPONSE |
| 20-29 | 4 | 16% |
| 30-39 | 12 | 48% |
| 40-49 | 6 | 24% |
| 50-59 | 3 | 12% |
| TOTAL | 25 | 100% |

According to the Figure 7, 16% of respondents were in the interval of twenty and twenty nine years old, 48% between thirty and thirty nine years old, 24% between forty and forty nine and twelve % from fifty to fifty nine. The profile of age together with the demography composition above, highlight the maturity inside those

companies as well as diversity. Age diversity places the organisations at an advantage, as much knowledge and expertise can be gleaned from older employees as well as new ideas from younger ones.

FIGURE 7: Response by age group



The table 2 below show us that the major part of respondent have the supply chain certificate, together with those who have the degree. Respondent who get the diploma level and matriculation have 12% each.

TABLE 2: Level of education and position

| HIGHEST QUALIFICATION | NUMBER OF RESPONSE | PERCENTAGE OF RESPONSE |
|------------------------------|---------------------------|-------------------------------|
| DIPLOMA | 3 | 12% |
| DEGREE | 8 | 32% |
| MATRICULATION | 3 | 12% |
| SUPPLY CHAIN CERTIFICATE | 11 | 44% |
| TOTAL | 25 | 100% |
| POSITION | NUMBER OF RESPONSE | PERCENTAGE OF RESPONSE |
| DIRECTOR LEVEL | 0 | 0% |
| SENIOR MANAGEMENT LEVEL | 12 | 48% |
| MIDDLE MANAGEMENT LEVEL | 6 | 24% |
| SUPERVISORY LEVEL | 2 | 8% |
| SENIOR LEVEL | 4 | 16% |
| JUNIOR LEVEL | 1 | 4% |
| TOTAL | 25 | 100% |

4.3) Multiple regression analysis

Regression analysis is a statistical tool that utilizes the relation between two or more quantitative variables so that one variable can be predicted from the other, or others.

Regression analysis can be used to determine whether the relationship between the dependent variable and predictor variable is significant; and how much variance in the dependent variable is accounted for by the predictor variable. The purpose of this research is to simply understand the predictive relationship between a set of variables.

The equation used for this research is based on the following general formula:

$$Y = mX + mX1 + MX2 + mX3 + e$$

Where:

Y = Indirect purchasing improvement (dependent variable)

mX = intercept

mX1 = Supply base reduction

mX2 = supplier relationship management

mX3 = Organizational communication

e = Error term

4.3.1) Method

The GNU Regression, Econometric and Time-Series Library (GRET) software were used for the empirical analysis of the relationship between the independent variable; and the dependent variable which is Indirect purchasing improvement. These relationships include the impact of those independent variables on the dependent variable.

CHAPTER FIVE

MEASURING INSTRUMENTS AND DATA ANALYSES

Introduction

Following a subsequent analysis of the literature on strategic purchasing based on approaches to increase the efficacy and competitiveness of indirect purchasing, a self-constructed questionnaire-measuring instrument was developed, used for primary data collection and variables measurement. The questionnaires are associated with both the positivistic and phenomenological methodologies.

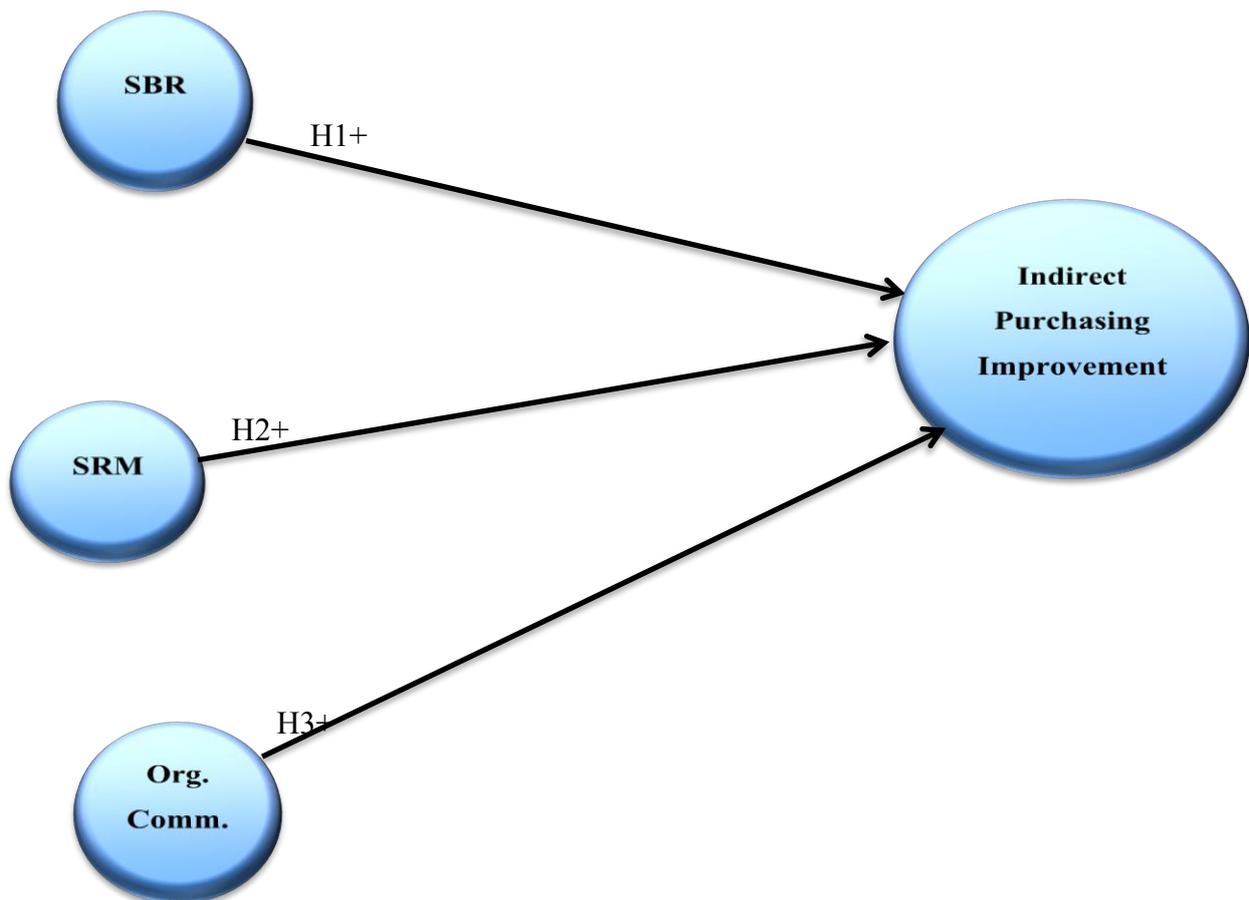
A questionnaire is a list of carefully organized questions chosen to elicit accurate answers from a sample chosen. Questionnaires are used to collect and assess the daily details of the chosen participants, think or feel by means of closed questions (Rowley, 2014)

The questionnaire used in this research consisted of mostly closed and a few open-ended questions based on the content analysis of the literature review of variables.

5.1) HYPOTHETICAL MODEL OF INDIRECT PURCHASING IMPROVEMENT

Based on the figure 4, the following hypothesis was made in order to perform the analysis of the impact that the independent variable might have on the dependent variable.

FIGURE 4: Hypothesis model of indirect purchasing improvement



5.1.1) The influence of supply base reduction (SBR) on indirect purchasing improvement

Hypothesis H1: stipulated that supply base reduction exerts a positive influence on indirect purchasing competitiveness.

The null hypothesis formulated in this regard was:

Hypothesis H01: Supply base reduction exerts no influence on indirect purchasing competitiveness

5.1.2) The influence of supplier relationship management (SRM) on indirect purchasing improvement

Hypothesis H2 stipulated that supplier relationship management exerts a positive influence on indirect purchasing competitiveness.

The null hypothesis formulated in this regard was:

Hypothesis H02: Supplier relationship management exerts no influence on indirect purchasing competitiveness.

5.1.3) The influence of organisational communication (OC) on indirect purchasing Competitiveness

Hypothesis H3: stipulated that organisational communication exerts a positive influence on indirect purchasing competitiveness.

The null hypothesis formulated in this regard was:

Hypothesis H03: Organisational communication exerts no influence on indirect purchasing improvement.

5.2) THE EMPIRICAL RESULTS

The multiple regression analysis was conducted to statistically investigate the relationships among the determinants (independent variables): suppliers base reduction (SBR), supplier relationship management (SRM), organizational communication (OC) and indirect purchasing improvement (the dependent variable).

5.2.1) Regression result

The results of the multiple regression analysis are summarized in the table 3 below. The empirical result stated in the table indicate that the three determinants (SBR), (SRM), (OC) used in this study explain for 54% (R-square= 0,541) of the variance in the indirect purchasing improvement (IPI), it could be explain by the number of population considerate. This value can be accepted as good for the model. The value of R adjusted is lower than the one of R Square, which is always the case. These result attest that the determinant have an impact on the dependant variable.

All the independent variables are positives and significant for the dependent variable. The star beside of the p-value number informs us about the grade of significance. (SBR) and (SRM) have both one star which is 10% of level of significance, (OC) has two star that means 5% of significance.

The positivity of our independents variable came to confirm about the accuracy of the variable chosen for the model, but it cannot pretend to be enough to explain the dependant variable.

Table 3: Regression model

Model 1: OLS, using observations 1-25
Dependent variable: IPI

| | <i>Coefficient</i> | <i>Std. Error</i> | <i>t-ratio</i> | <i>p-value</i> | |
|-------|--------------------|-------------------|----------------|----------------|----|
| const | -1.81914 | 1.12050 | -1.624 | 0.1194 | |
| SBR | 0.462437 | 0.237534 | 1.947 | 0.0651 | * |
| SRM | 0.509009 | 0.276412 | 1.841 | 0.0797 | * |
| OC | 0.516672 | 0.248439 | 2.080 | 0.0500 | ** |

| | | | |
|--------------------|-----------|--------------------|----------|
| Mean dependent var | 3.560000 | S.D. dependent var | 1.157584 |
| Sum squared resid | 14.74223 | S.E. of regression | 0.837861 |
| R-squared | 0.541597 | Adjusted R-squared | 0.476111 |
| F(3, 21) | 8.270413 | P-value(F) | 0.000800 |
| Log-likelihood | -28.87147 | Akaike criterion | 65.74294 |
| Schwarz criterion | 70.61845 | Hannan-Quinn | 67.09520 |

5.2.2) Correlation coefficients

The following table present the correlation between all the variable of the model

Table 4: Correlation coefficients

Correlation coefficients, using the observations 1 - 25
5% critical value (two-tailed) = 0.3961 for n = 25

| Variables | IPI | SBR | SRM | OC |
|-----------|--------|--------|--------|--------|
| IPI | 1,0000 | 0,5773 | 0,5265 | 0,5698 |
| SBR | | 1,0000 | 0,3683 | 0,4072 |
| SRM | | | 1,0000 | 0,3135 |
| OC | | | | 1,0000 |

According to the above table, there exist a relationship between the dependent and all the independent variables. The dependent variable (IPI) have a positive relationship with all the independent variables, with the highest positive relationship been with (SBR), while the least positive relationship is with (SRM). This also informs us on the importance of suppliers base reduction on the improvement of the indirect purchasing.

Moreover, among the input variables, SBR has the highest relationship with OC at 0,4072 and the least relationship is the one between SRM and OC at 0,3135.

These outcomes therefore imply that the data can therefore be used to perform further analysis.

The next step was therefore to perform a summary statistic, which is explained in the subsequent section.

5.1.3) Summary statistic

Table 5 below provide us the summary statistic for both dependent and independent variables

Table 5: Summary statistic

Summary Statistics, using the observations 1 – 25

| VARIABLE | MEAN | Std. DEV | C.V | SKEWNESS | 95% PERCENTILE | Number of Observation |
|-----------------|-------------|-----------------|------------|-----------------|-----------------------|------------------------------|
| IPI | 3,56 | 1,158 | 0,325 | -0,724 | 50,00 | 25 |
| SBR | 3,56 | 0,821 | 0,231 | 0,035 | 50,00 | 25 |
| SRM | 3,72 | 0,678 | 0,182 | 0,385 | 50,00 | 25 |
| OC | 3,56 | 0,768 | 0,216 | -0,204 | 50,00 | 25 |

As seen in the table, the dependent variable (IPI) has the highest standard deviation with the mean at 3,56. The least standard deviation is (SRM) at 0,678 with mean at 3,72. Moreover, the covariance is positive for the entire variable. In addition, according to the skewness, the variables are distributed almost as normal.

CHAPTER SIX

DISCUSSION OF FINDINGS

6.1) Supply Base Reduction (SBR)

Based on our result stated on the table 3, a unit increase in the independent variable supply base reduction (SBR), increased up to 0,46 unit in the dependant variable. Moreover we can conclude the (SBR) have a positive impact on the dependant variable as sated in point **5.1.1** so the null hypothesis is rejected. This means that company is using the supply base reduction as strategic tools to manage the suppliers and is also supported by forty per cent of the respondent that agreed with this.

In order to maximize the advantages that can bring the supply base reduction, company can define more clearly the aims of this presenting the result to the employee team, this because thirty two per cent of the respondent said to be neutral in using this strategy.

6.2) Supplier Relationship Management (SRM)

The empirical result stated that supplier relationship management impact significantly on the indirect purchasing improvement, therefore, we could accept the hypothesis stated in point 5.1.2.

Moreover, when there is a unit increase in the supplier relationship management, the indirect purchasing improvement increase by 0,5.

This led us to confirm that companies are using also this variable as strategic tool. The findings indicate that forty forth per cent of the respondent agree to be using this tool while twelve nine per cent disagree.

To be competitive, organization should improve the relationship between buyers and suppliers this can be effective by focusing on close relationship with key suppliers and then extend to the overall number of suppliers. In addition companies should increase the frequent visit each other in order to debate on the price increase, and especially to share some capital information about the market trend. They should implement a valid platform that could allow them to get upgrade information for example in the case of delay in delivery.

In addition, companies could implement some key performance indicators (KPI) that would help buyers to highlight their expectations and fix objectives with suppliers.

6.3) Organizational Communication (OC)

The literature already outlined the important of communication inside the company. The respondents of our questionnaire support it as well with the percentage of forty heights that confirm to use the variable as strategic tool. Therefore the null hypothesis is rejected because the independent variable (OC) is resulting to be significant and impacting positively on the dependent variable. A unit increase in (OC) led to increase by 0,51 the dependent variable.

The empirical result led to us to realise that with the technology, people tend to prefer electronic communication more than face-to-face one. The positive aspect of that is the rapidity of execution in sending message to someone else. But the negative side is that not always an email give the main information that the sender wanted and an email can also be missed among the other email and create a delay in the transmission.

Moreover, emailing is limitative for the concept of relationship building, which is as stated before an important aspect of the company strategy, for this it is recommended to the company to develop meeting and forum in order to encourage people to meet together and share information, ideas and so on.

6.4) Indirect Purchasing Improvement (IPI)

The empirical findings stated that indirect purchasing is effective and efficient in the selected companies. The indirect purchasing has knowledgeable buyers and they collaborate with all the other department of the company. They are involved in the strategic planning of the company and do more than just place orders, this can led us to conclude that they have competent people at those position.

Moreover, indirect purchasing has a positive relationship with the three other variable and they impact significantly on it. The company should therefore focus more attention on the organizational communication as it has according to our model the stronger relationship than the other. This could be explaining by the fact that

many company are aware of including indirect purchasing as important aspect of the purchasing department as well as direct purchasing.

CHAPTER SEVEN

CONCLUSION AND LIMITATIONS

7.1) Conclusion

This research aimed to determine the variable that could impact positively the indirect purchasing and led to its improvement using the multiple regression models. The data used cover twenty-five professional coming from twelve manufacturing companies randomly chosen in the Marche region in Italy.

The empirical result establishes that, there is a positive relationship between the dependent variable indirect purchasing improvement and supply base reduction, suppliers' relationship management and organizational communication which are independent variables. Moreover this result is in line with the literature used to perform our analysis.

Supply base relationship is a strategic tool that companies used to perform the efficiency in term of relationship and communication with the supplier, and also to achieve the company's objective that is to reduce cost.

Supplier relationship management is an important aspect for the purchasing department in the daily task of buyers. A good relationship with supplier brings efficiency and effectiveness to the company.

Organizational communication is the variable that improves the most indirect purchasing according to our model. So company should emphasized it in order to be efficient in the indirect purchasing department.

7.2) Limitation of The Study

Several limitations were highlighted throughout this research. The data analysis was limited only in the Marche region and could have been extended to the overall country. The sample size used to perform this research was also small.

The research used only three variable to analyse the impact on the indirect purchasing among several other variable that could be also analyse.

7.3) Suggestion for further Research

This research focus only in limited geographical area and deal with few variables when the concept of indirect purchasing is very wide and assai interesting. Therefore further research should be undertaken to analyse other factors such as customer relationship, personnel competency, company environment and so on, which could probably positively impacted on indirect purchasing.

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QUESTIONNAIRE

SUPPLY BASE REDUCTION

- It is beneficial to deal with fewer suppliers rather than many
- We reap economies of scale benefits from doing business with fewer suppliers
- Dealing with fewer suppliers fosters good cross-organisational relations
- We team up with suppliers to initiate and execute continuous improvement strategies
- Dealing with fewer suppliers creates a good platform for supplier development
- Supplier development is easier to execute with few suppliers than with many
- Reducing the number of suppliers improves the control of expenditure

SUPPLIER RELATIONSHIP MANAGEMENT

- My suppliers inform me in advance of late deliveries
- My suppliers inform me in advance of new products
- My suppliers inform me in advance of price increases
- My suppliers inform me in advance of market trends
- I have easy access to suppliers
- Suppliers have easy access to me
- Suppliers visit us frequently
- We visit suppliers frequently

ORGANIZATIONAL COMMUNICATION

- Our face-to-face communication with individuals outside my department is effective
- Our telephonic communication with individuals outside my department is effective
- Our face-to-face communication with individuals inside my department is effective
- Our telephonic communication with individuals inside my department is effective
- Any system change in my department is well communicated to all concerned

INDIRECT PURCHASING IMPROVEMENT

- Our indirect purchasing department has knowledgeable buyers.
- The number of buyers in our indirect purchasing department is adequate
- The buyers in our indirect purchasing department create purchase orders timeously
- Our indirect purchasing buyers do more than just placing orders
- Our indirect purchasing buyers are constructively involved in strategic planning
- Our indirect purchasing buyers negotiate effectively with suppliers to get the best deals for the organisation
- Our indirect purchasing buyers effectively collaborate with other departments to devise continuous improvement initiatives

ANNEXURE 1: THE QUESTIONNAIRE COVER LETTER

Dear Respondent

I am a Graduating student in International Economics and commerce (I.E.C) at the Università Politecnica Delle Marche. The topic of my research project involves an investigation of the factors that impact the competitiveness of indirect purchasing divisions in firms in manufacturing companies sector. We believe that this study would make a contribution to increasing the competitiveness and profitability of these firms. The empirical results of the study will be made available to the participants on request.

You are part of our selected sample of respondents whose views we seek on the above- mentioned matter. We would therefore appreciate it if you could answer a few questions in this regard, which should not take more than fifteen minutes of your time. Please note that the information gathered will not be used against any organisation in any way and that all your responses will be strictly confidential. Please return the completed questionnaire by the 15 May 2020. We thank you in advance for your highly appreciated contribution towards this study.

There are no correct or incorrect answers. Please answer the questions as accurately as possible. For each statement, tick the number which best describes your experience. For example, if you strongly agree with the statement, tick the number 5.

If you strongly disagree with the statement, tick the number 1. **Tick only one answer for each statement, but answer ALL QUESTIONS please.**

Thank you very much.

Donald Ulrich Guimfack

Student

Business Organization and Strategy - Univpm.