

Louvain School of Management

The pricing strategies in the machine tool manufacturing industry and the factors influencing it.

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TABLE OF CONTENTS

1. INTRODUCTION	1
2. LITERATURE REVIEW	3
2.1. Servitization and supply side perspective	3
2.1.1. Services classification	3
2.1.2. Why should manufacturers become service providers?	5
2.2. Supply side pricing strategy	6
2.2.1. Components of the pricing strategy.....	7
➤ Pricing strategies	7
➤ Bundling options	9
➤ Revenue models and payment mechanisms	10
2.2.2. Factors influencing supply side pricing strategy	11
➤ The competitive position	11
➤ Country and sector specific practices	12
➤ Tangibility of the services.....	12
➤ The role attributed to services	13
➤ Management of the sales force	14
➤ Value creation	14
➤ The degree of servitization.....	14
2.3. Demand side service procurement	15
2.3.1. Factors influencing demand side service procurement.....	16
➤ Service value visibility	17
➤ Service offer	18
➤ Supplier's competition	18
➤ Buyer	19
➤ Risk	19

3. METHODOLOGY	21
➤ Research strategy	21
➤ Case selection	22
➤ Data collection and analysis	24
4. PRESENTATION OF RESEARCH CASES	27
➤ Case A: Merco Machines	27
➤ Case B: Gelderblom CNC Machines.....	28
➤ Case C: Pegard Productics S.A.	28
5. PRESENTATION OF FINDINGS	30
5.1. Findings preview	30
5.2. Presentation of findings	33
5.2.1. Service offering: early stage of servitization	33
5.2.2. Components of the pricing strategy.....	34
➤ Pricing strategy: Input and competition based	34
➤ Bundling options: Standard bundling.....	35
➤ Revenue model: Traditional	36
5.2.3. Factors influencing the pricing strategy	37
➤ Role of services for the service provider	37
➤ Competitive position	38
➤ Risk integration	40
➤ Balance of knowledge	41
➤ Trust.....	43
➤ Service offer	44
➤ What is a pricing strategy?	45
5.2.4. Factors diagram.....	45
6. DISCUSSION.....	47

7.	CONCLUSION	51
7.1.	Managerial recommendations	52
7.2.	Limitations and future research	53
8.	BIBLIOGRAPHY	55
9.	APPENDICES	61
➤	Appendix 1: Pre-selection questionnaire	61
➤	Appendix 2: First round of interviews guideline	66
➤	Appendix 3: Second round of interviews guideline	66
➤	Appendix 4: Open coding cross case analysis	69

1. INTRODUCTION

Industrial buyers are becoming more and more interested in buying entire solutions to go with their products, showing a trend in the procurement process in the direction of a service dominant logic, motivated by the will to be more cost-efficient and to reduce their supplier base (Lindberg and Nordin 2008). This trend goes by the name of “servitization”.

Neely (2013) defines servitization as "the innovation of an organization's capabilities and processes to better create mutual value through a shift from selling products to selling Product-Service Systems". In other words: to sell an entire field service support system around a product.

To this definition, Neely adds two related concepts: the *product-service-system* which is an offering that integrates both products and services valuable to customers and two, the '*servitized*' *organization*, which creates, from design to delivery, these product-service-systems. Neu and Brown (2005) see the process of B2B service development in manufacturing firms as a process through which “managers create new business units, or adjust the responsibilities of existing business units, to provide business to business services”.

Although servitization is becoming a mainstream trend in the manufacturing industry, companies that have applied the underlying concepts have shown different (business-economic) results. Some raised their margins compared to the ones they achieved with the products, whereas others have not been able to break even. (Reinartz and Ulaga, 2008)

One of the factors that plays an important role in the solution provider's path to advanced – and profitable- servitization is the pricing strategy that is adopted. By means of a clever pricing strategy a supplier can be able to make its service offer more attractive to buyers while at the same time capturing higher margins (Oliva and Kallenberg, 2003; Bonnemeirer, Burianek, Reichwald, 2010; Mallaret, 2006). In this regard, Rapaccini (2015) argues that a sophistication of the pricing strategy used by firms is a reflection of the advancement of an organization in the servitization process on a whole.

In spite of the former, in practice it seems that many organizations are sticking to traditional pricing strategies (Hünerberg, Hüttman, 2003). This study will thus, for the first time, look at the pricing strategies used in the machine tool sector.

Then, although the factors impacting the pricing strategy, as well as evolutions in terms of progressing with more advanced pricing practices, have been reviewed by some scholars (Malleret, 2006; Rapaccini, 2016), research on this topic are not abundant. Moreover, research on this topic tend to overlook the role of the buyer within the overall setting. is why we will try, during this research, to identify the different factors that are influencing organizations' ability to provide innovative pricing strategies. Factors will be looked at from two angles, the supply side and the demand side.

In order to do so, this paper will be divided into seven chapters. After this introduction, a review of the literature will be executed. Then, the methodology used for this research will be presented. I.e., a multi case study, based on semi structured interviews, was used with different type of service providers. Afterwards, the cases are presented and findings from cross-case analysis will be exposed. Those findings are then compared to what can be found in extant literature. At the end, the main findings will be presented along with managerial recommendations, limits of the research and the different ways this topic can be future explored.

2. LITERATURE REVIEW

In order to assess what are in reality the pricing strategies being used and what are the different factors that influence these practices, three angles should be reviewed: what pricing practices can be discerned and what kind of trends are unfolding; what is the supply side perspective about those practices (what kind of factors influence the choice for specific practices), and what is the demand side perspective (what kind of factors influence the preference on the side of the buyers for specific practices).

Consequently, this chapter will be structured as follows. First a classification of different service types and the advantages of manufacturers becoming service providers will be presented (2.1). Then, corresponding pricing practices will be assessed along with the factors influencing those practices from the supply side (2.2). Finally, demand side service procurement will be reviewed, followed by, the factors impacting it (2.3).

For this literature review, searches were mainly made through four search engines; SpringerLink, ScienceDirect, ProQuest and Scopus as it is appreciated by researchers involved in servitization (Baines et al. 2009, Zhang and Banerji 2017).

2.1. Servitization and supply side perspective

2.1.1. Services classification

Uлага and Reinartz (2011) propose to classify the service offerings into four categories:

First, *product life cycle services (PLS)* refer to services that will make customer's access to products easier and will keep the products working during their life cycle. These services are directly linked to the use of the product, represent supplier's commitment to the customer to perform a deed. PLS activate the sale and set the reputation of the manufacturer as a service provider, paving the way for more complex service offerings. In this category, customers are expecting services to be standardized and as cost-efficient as possible. Tukker (2004) adds that these services also allow customers to reduce their total cost of ownership.

Second, *asset efficiency services (AES)* which are less standardized, also focused on the customer's products but this time with the aim to increase productivity, a commitment to performance. This can be done by working proactively to detect machine failure or by training

customers to make the most of the product they have acquired (Challagalla, Venkatesh and Kohli 2009). These value-added services are a mean for suppliers to increase service offering and to differentiate themselves from competitors.

Third, *process support services (PSS)*, are services aiming to improve the customers' business processes. The responsibility and operability of the customer process remain in the customer's hands: they are free to implement or not the improvements suggested by the supplier. PSS are usually a way for vendors to differentiate themselves from their competition and to open the customer to product service systems. They are customized to customer needs and require product expertise in addition to customer process knowledge.

Lastly, *process delegation services (PDS)*, are services where the suppliers execute the customer's processes for him or jointly. The supplier commits to achieve a performance threshold and, assuming at least part of the risk related to the process outcome, tries to attract customers. These services are highly customized because they are designed to meet specific customer needs and require the customer to be involved in the development process. In this case customer and supplier interests are aligned. PDS require the customer and provider to work together to develop new KPI through which they will assess a complex gain sharing agreement, also they will need the supplier to be able to assume at least a part of the risk.

Complementarily, Tukker (2004) proposes a way to categorize product service system offerings into three categories (See Figure 1), based on the relationship between the customer, the vendor and the revenue model.

First, *product oriented services (POS)* and the *user-oriented services (UOS)* can be assimilated to product life cycle systems, but a distinction is made between who owns the product. For POS the product ownership is in the hands of customers, contrary to UOS where it is in the supplier hands. For UOS's, customers pay for the product through a lease, rental or sharing agreement. This gives the producer an incentive to keep its product working for a long time, in addition leading to maintenance services, and products developed with long life cycle materials.

The last category is *result-oriented services (ROS)*, which can be compared to PSS or PDS, where the manufacturer does not sell a product but a result or a skill. Tukker (2004) adds that customers receive a mix of services while the provider retains ownership of the product.

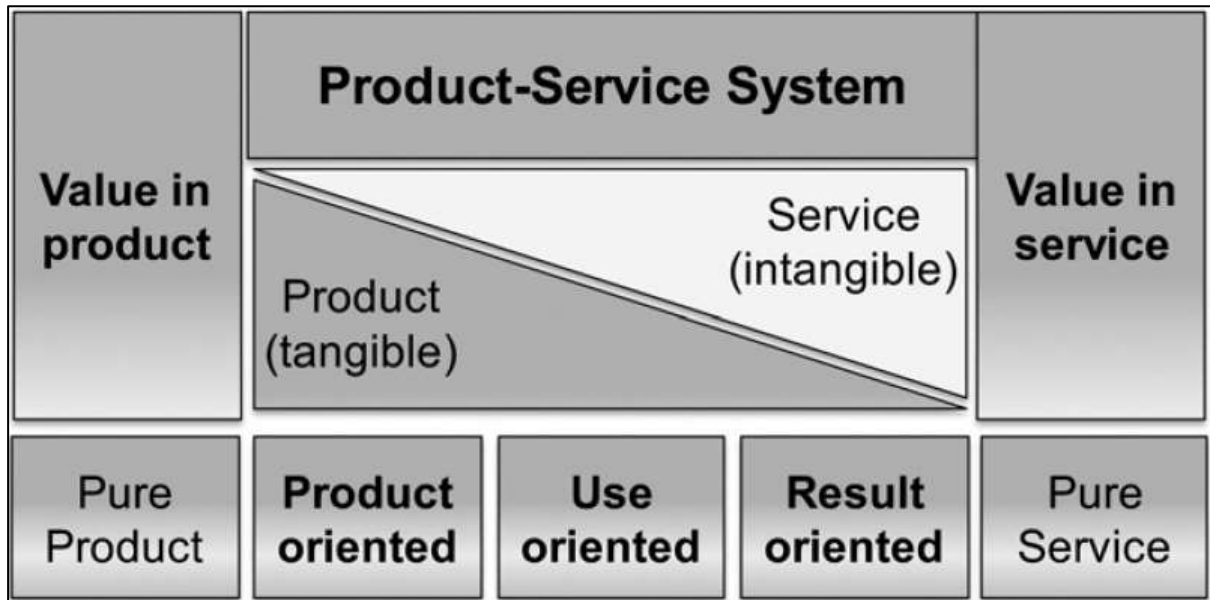


FIGURE 1: SERVICE OFFER CLASSIFICATION BY TUKKER (2004, P. 248)

2.1.2. Why should manufacturers become service providers?

In their paper, Oliva and Kallenberg (2003) consider service management to be linked to the manufacturer installed base (IB), the IB being the measure of the number of products sold and currently in use.

In this context IB services are defined as “the range of product- or process- related services required by an end-user during the useful life of a product in order to exploit it effectively as part of its operating process”.

Through this definition, the authors assert that the manufacturer create competitive advantages by providing services to their installed base. Indeed, the manufacturer has a lower cost of acquiring customers because they are involved in the sale of the product, they have first-hand information about the machinery that joins the IB.

In addition, they have a lower cost of acquiring knowledge, and are in the best position to access special knowledge about their products and the technology needed for services.

When offering services to its installed base, the supplier can systematically collect information about the use of their products and customers processes. This access to data is a way for manufacturers to differentiate themselves from other manufacturers and keep long term advantage regarding pure service providers (Ulaga and Reinartz, 2011).

They are also well positioned to know what the service requirements are for their products. Finally, producers have lower capital requirements as they have access to the production technologies needed to repair, upgrade or produce spare parts needed for the IB. At this point organizations often discount the price of services as it is a way to increase the experience and reputation of the service offering.

Once the manufacturer has entered the IB services market (going to the right on Tukker's classification), by increasing the value of services, Oliva and Kallenberg (2003) assert that the manufacturer will *expand its IB services*. One of the first changes for the organization will be to focus on customer interactions, moving from the transaction to the relationship. In order to do this, the organization will, among other changes, rethink its pricing strategy.

Reinartz and Ulaga (2008) witnessed that some organizations are already in the service business but are not aware of it. They provide services for free although they could have charged for it. By starting to charge for them, even for a low price, managers and customers begin to realize the value of the services involved in the transaction. It can even turn some services purchased from a profit drain to a profit engine.

2.2. Supply side pricing strategy

Through their work, Nudurupati, Lascelles and Wright (2015), Sundin et al. (2009) recognize pricing strategy as an important challenge an organization faces while going through servitization. The supplier must explore the various contracting possibilities to find the solution best suited to the economic and benefit needs for both supplier and customer. Also, the supplier should find out if he needs new capabilities to sell the PSS.

Mallaret (2006) identifies several questions regarding service pricing

The first, fundamental question is whether services are billed or not. If billed, should they be a source of margin or be charged at real cost? Finally, should services be bundled with the product or not?

In his paper, Neely (2008) adds that as servitization can change the contractual relationship with buyers and set on longer terms for complex engineered services, new challenges will arise. One of these will be for the organization to be able to manage and control risk over the long-term, and to model and comprehend the costs and benefits of this relationship. This ability to understand how risk factors can change over the long term will be necessary for the supplier to be profitable through their servitization.

Since the implementation of services often comes from the desire to protect the main product, there may be a tension between products and services leading to undervalued services (Auguste et al. 2006). In order to achieve balanced pricing, the organization must align it with its strategy and be ready to trade its product penetration against service growth and margins.

2.2.1. Components of the pricing strategy

In his paper, Rapaccini (2015) identifies four characteristics of the pricing of service offerings, detailed below.

➤ Pricing strategies

The research defines three different types of pricing strategies (See Figure 2).

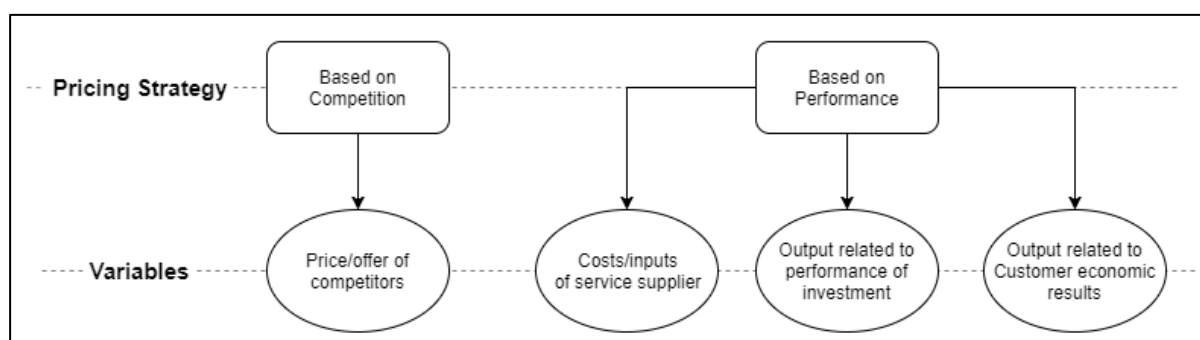


FIGURE 2: PRICING STRATEGIES BASED ON RAPACCINI RESEARCH

The first strategy is competition-based pricing, where the price will depend on competitors in the market.

The second strategy is performance-based pricing where the effectiveness of the investment is used as a base to compute price through different variables.

Performance based pricing strategy can be divided into three categories.

First, cost or input based pricing, where the price is computed from the costs incurred, to which, a desired margin is added. Costs are computed from resources required to deliver the service, such as, number of full-time equivalents, equipment, time, ...

Second, output-based pricing, related to the performance of the investment, such as, required maintenance times, number of non-conformities or the maximum output per period of time.

Third, output-based pricing, related to customer economic results which can be objectively measured by the customer (Hünerberg and Hüttman 2003; Dintrans, Anand, Bhattacharyya, 2014).

Inputs and competition based pricing strategies are widely used in the manufacturing industry even though literature suggests that it is not an effective solution for servitized businesses (Kindström, Kowalkowski & Sandberg 2013).

Studies suggest that the third category of output based pricing is more appropriate for servitized business. The price at which the product service systems should be set must be put into perspective with the value the customer attributes to it.

As product service systems will create a new value for the customer, it is necessary to create a new pricing model that will include both products and services (Grönroos 2011; Oliva and Kallenberg 2003).

Service pricing practices are a good indicator of the maturity of the servitization of the organization (Mallaret 2006).

Organizations that maintain the traditional pricing strategy, even when bundling their products and services, appear to use services as a way to lock in customers, reduce costs or simplify delivery. Even though, during the servitization process, organizations tend to offer innovative pricing strategies for tailored and integrated offers.

In this case, cost savings and productivity improvements are taken into account when that integrated offer is priced. The supplier will generally shift to value-based pricing although it appears that company service focus still has a predominant role in the pricing strategy.

To align the objectives of both parties, longer-term contracts are considered in terms of risk-reward sharing and compensation mechanisms.

➤ Bundling options

Services and products can be offered in a bundled or an unbundled way.

Bundling is sometimes used by companies to escape the price strategy issue, by simply offering all services and the product in an all-inclusive package (Ulaga and Reinartz 2011; Rapaccini 2015).

Bundling can be challenging when it comes to pricing and costing as the design of the offering can become complex when products and services are put together to form an integrated solution (Rapaccini, 2015).

Oliva and Kallenberg (2003) assessed that firms that recently went into servitization tends to offer services and products unbundled contrary to more advanced servitized firms which tend to propose integrated solutions.

The use of all-inclusive types of deals often result in maintenance contracts, caused by the supplier's desire to make better use of its service capacities (Oliva and Kallenberg 2003).

Indeed, services become a fixed-cost once the organization is set up and their capacity utilization then becomes the main driver for benefits.

With these maintenance contracts over services the organization can secure a more predictable demand for the installed capacity and a better utilization of the capacity. Through a better utilization of its service capacity, the supplier should be able to develop cost advantages that can result in a lower price for maintenance. Furthermore, the first advantage that a manufacturer has compared to a maintenance organization is, as said previously, the knowledge of the maintenance of their products that they have accumulated over the years by maintaining their own equipment and "the use of their product development and systems

integration expertise to develop and deliver better maintenance practices” (Oliva and Kallenberg, 2006).

➤ Revenue models and payment mechanisms

Malleret (2006) defines the revenue models and payment mechanism as the mechanisms put in place in order to set the price for services or products. Bonnemeirer, Burianek, Reichwald (2010) divide revenue models in two main categories, traditional and innovative revenue models.

The traditional part comprises two revenue models. On the one hand, there is the ‘fixed-fee model’ is where the buyer and the supplier will agree on a fixed price which will be charge even if the customer do not consume the service in the end. This is often the case for simple services. On the other hand, there is the ‘cost-plus-model’ is where the supplier will charge its services through the effort provided, to which, a margin will be added (Kalnins, Mayer, 2004; Oliva and Kallenberg 2003). Those two revenue models have a common point in the fact that they both only take into account the efforts of the service provider (Nagle, Hogan, 2006).

The innovative part comprises three revenue models. ‘Usage-based model’ is where the consumer will pay in function of the usage he makes of the product according to a previously negotiated price within a certain time period. ‘Performance-based model’ is where the supplier commits to a certain threshold to reach regarding the performance level of the customer. If the threshold is not reached, the supplier can receive penalties, otherwise the customer will pay according a price they previously agreed on. The performances to reach can be regarding the availability of the supplier hotline service or the availability of their communication system for example. ‘Value-based model’ is where the supplier commits to provide optimization or productivity for the customer. The variables used in this case can be the total cost of ownership of the customer for example (Bonnemeirer, Burianek, Reichwald, 2010). The variables used for the revenue model mechanism will vary according to the processes used by customers to create value (Kowalkowski et. al. 2017).

Hünerberg and Hüttman (2003) assert that in this kind of arrangement, incentives of customers and suppliers are better aligned, reducing uncertainties such as moral hazard, risk of selecting the wrong supplier or uncertainties linked to the quality of the product.

Because the supplier is paid according to performance, he will only provide useful services to the customer. This type of pricing mechanism, pay-per-use or pay-per-outcome, is considered as more innovative as the supplier is more likely to provide valuable product and services to its customers (NG, Maull, and, Yip, 2009).

Hünerberg and Hüttman (2003) also indicate that by reducing moral hazard and harmonizing supplier and buyer incentives, transaction costs for the buyer (such as the cost of quality testing) the provision for negative investment results and costs for information gathering can be reduced.

Servitized companies should shift to this last type of payment mechanism while offering comprehensive contracts based on risk and rewards sharing between supplier and customers (Windahl an al. 2004). Indeed, when using performance as a revenue model, the supplier assumes part of the technical risks such as machine failure (Oliva and Kallenberg 2003), and when using customer economic results as a variable to compute the performance, the supplier even integrates some of the market risks of the buyer (Hünerberg and Hüttman 2003).

2.2.2. Factors influencing supply side pricing strategy

As factors influencing the pricing strategy Mallaret (2006) proposes what follows.

➤ The competitive position

The more the balance of power goes to the supplier, the more he will be able to charge higher prices for his services.

The author proposes three different factors explaining the competitive position: the product performance (quality and/or technicality), what is at stake for the customer and customer dependency on the product. Anderson and Narus (1995) add, that when using standard services, it will be difficult to price differently depending on the customer, which prevents the

organization from capturing the premium that some customers are willing to pay because they value services more than others.

Rapaccini (2015) confirms that standard service offerings' pricing strategies are affected by competition in the service market, but, by developing full services contract offerings, an organization can lock customers into company's offering while drawing up barriers against competitors.

Although, Rapaccini (2015) asserts that the way the competitive position or other exogenous factors affect the pricing strategy is not meaningful. But that competition can rather force an organization, who, often, is leading the market or is forced by country regulations, to offer more integrative product service solutions or customized solutions. These solutions will allow the service provider to capture a higher margin due to the higher value that has been created for customers. The rest of the market on the other hand will tend to stick to standardized service offers because of their will to compete on costs, inducing the use of bundles. In other words, the only thing affecting the ability of an organization to set innovative pricing methods is its capacity to avoid competition on price by offering tailored offers.

➤ Country and sector specific practices

The service providers are constrained to follow their competitors pricing methods, particularly the one of the leader on the market. One competitor taking the decision to provide a specific service for free might lead the market to follow the initiative, even if, the practice causes harm to the whole market. On the contrary, a market leader that have the will to conserve their margins on their services might act as protectors for the rest of the market. The pricing method might also change in function of the geographical habits. Some countries or regions are more used to charge for services than others for example (Malleret, 2006).

➤ Tangibility of the services

To be able to charge a service to its customer, it is important for a manufacturer to be able to create value for consumers and to be able to demonstrate it to them. Also, the more the service is visible to the customer, the more the supplier will be able to charge for it. This can

be help by developing techniques to express the value that services can create, through performance improvement plans, specific KPI's, or value based contracts. Another way would be to show directly to the customer the decrease in costs that services can incur for him. For the maintenance services for example, the supplier can increase visits to the customer sites in order for the customer to better witness what he is paying for (Mallaret, 2006).

➤ The role attributed to services

For Malleret (2006), the role the service offer plays for the organization or the strategy behind the service offer will impact the ability for an organization to price them. The service offer might be used in order to foster the sale of product, or in the contrary, growing a service portfolio offer might be an end in itself in order to generate more steady revenues. The decision to charge for service provision or to provide them for free will involve various parameters and should take into account to what market segmentation the services are addressed.

Rapaccini (2015), when speaking about bundling, adds, that in organization at the early stage of the servitization process, bundling represent a minor proportion of the total service business. When those organizations use bundling it does not serve as a strategic intent to grow the value created for the customers, but it becomes a way to lock in customers and foster penetration while offering discount prices.

The way products and services are bundled should be aligned with the strategic intent of the firm. If the company intends to increase product penetration and maintained market share, it should always bundle its services and product. On the contrary, if the firm aims to create an independent business, the sale of service separately seems the appropriate option.

Moreover, bundles are standardized allowing the organization to simplify planning and execution. The more servitized manufacturer proposes tailored bundling options the better it will fit customer's needs (Rapaccini, 2015).

➤ Management of the sales force

Manufacturers and sales staff tend to give more importance to product (Anderson and Narus, 1995). Indeed, the sales staff priority is the sale of product, which pay them commission, and so services may be provided for free to facilitate the sale, which is particularly true for PLS services (Reinartz and Ulaga 2011).

Although the service might procure indirect revenues, through the increasing of product sales, those might not be sufficient to cover the cost of the services. (Balgin and Malleret, 2004). Firms charging services through products price are still at the first steps of servitization and still need to learn how to value their services (Oliva and Kallenberg 2003).

Through the control of the quotations and an adapted remuneration structure an organization can improve the management of its sales force and, thus, have a better supervision of the revenue created from services. - This can be done through implementing software that will compute the price of services of by changing the variables used to calculate the commission of a sales person (Malleret, 2006).

➤ Value creation

Anderson and Narus (1995) assert that it is difficult for the supplier to accurately identify the value that services create for customers. A study reveals that in general, suppliers only measure the satisfaction of their customers through the service provided, which is a weak indicator of the value actually created. Although this is nuanced by Oliva and Kallenberg (2003) who, as previously explained, said that the manufacturer has a knowledge advantage when offering services to its installed base.

➤ The degree of servitization

Rapaccini (2015) explains that the pricing strategy used in an organization will depend on the extent to which a manufacturer is servitized. Manufacturers in the machine tool industry, when they have a basic service portfolio, tend to use cost-based pricing to which they add the desired margin. On the contrary, advanced servitizers will tends to set up more innovative pricing strategies, which means that the organization will not only base on costs the

computation of its prices. Although, even with a developed service portfolio, some organizations seem to maintain a cost based strategy for their simpler services.

Those factors may explain the difficulties faced by organizations in benefiting from servitization (Gebauer, Fleisch, Friedli 2005).

2.3. Demand side service procurement

To be able to create value for the organization, the services designed must create value for the customers, the company needs to understand what customers value and what they extract from the services (Neely, 2008), their key success factors and what their processes are. To do that, the firm should keep close and regular contact with its customers in order to develop trusted relationships with them.

Furthermore, by keeping close and regular contact with customers, the buyer will build customer intimacy (Treacy and Wiersema 1992), defined as the precise segmentation of the market followed by the desire to meet the needs of the segmentation. This will give the provider the opportunity to develop powerful business models based on customer needs and then deliver value to customers that competitors cannot reach, locking the customers in their product and service offering.

Although, in reality, it is not always easy to learn what customers value as several actors, such as the purchasing manager, workshop employees or sales managers, are involved with different interests. Furthermore, when procuring services, these should be deployed in a competitive quality and quantity (Mallaret, 2006).

Visnjic Kastalli, Van Looy, Neely (2013), through their research, testified of a company's need for new indicators related to market performance in regard to services.

Two questions had to be answered. What proportion of customers purchase services and to what extent do customers adopt the service offer? Or in other words, to what extent is the potential for customer service procurement achieved? Two indicators have emerged, service adoption and service coverage, which will testify on the breadth and depth (quality) of the relationship with customers. The *service adoption* is "*the proportion of the installed base of customers who engage in service transactions*" (Visnjic Kastalli, Van Looy, Neely, 2013).

As products in the machine tool industry can have a long-life cycle, the time service is procured can be the only point of contact with the installed base. In other words, the service adoption indicates the proportions of customers with whom the organization maintains a continuous interaction or relational strength. The importance of this relationship is also emphasized by customers who expect more open-ended interactions with the supplier, especially for complex services (Lindberg, Nordin 2008).

Complementarily, the service coverage indicates "to what extent does the service portfolio cover the overall needs of the average customer with whom a service relationship has been established". Significant service coverage shows that the supplier is present in the buyer's mind.

Pricing strategy plays an important role in the service coverage, an organization under-pricing their services, in order to promote their products might witness a higher service adoption but will get a lower service coverage as well as lower revenue and benefits for their service offer. Service coverage can then help identify wrong pricing of services. These two factors are supported by the study of Gebauer, Fleisch, Friedli (2005) who indicates that a permanent contact with the customers, helped with appropriate communication tools, and the right mindset of the people in contact with the buyers is one of the key managerial implications to overcome the service paradox.

2.3.1. Factors influencing demand side service procurement

According to Lindberg and Nordin (2008), service procurement is evolving among manufacturing firms. From a reactive and unstructured process, service procurement seems to be moving to a more structured activity, with the long-term goal to align service procurement with organization's strategy.

Moreover, Neu and Brown (2005) consider the external environment, strategy and factor alignment as key success factors for manufacturing organizations entering the service industry. When entering the service market, manufacturers face a highly complex environment. First, because buyer information technologies have become an integrated system. Second, because customer attributes greatly differ from one to another, they have unique information systems, belong to various, sometimes unrelated, industries, are of

different sizes, from different parts of the world, and expect their needs to be answered in different ways. Also, manufacturers face a dynamic environment to which customers react in different ways, adding even more complexity to the environment.

Because of the important impact customers have on manufacturers organization, this research will try to assess the factors that will impact customers service procurement below.

➤ Service value visibility

It appears that charging for services is not so easily accepted by customers due to the intangible nature of services, Mallaret (2006) detected three sources of difficulties when charging for them. First, customers do not receive the right to ownership but only the right of usage. Second, as services are invisible by nature, customers have difficulties in identifying the cost incurred to the supplier when supplying those services. Third, customers cannot identify the quality of the service before receiving it.

The customer will either realize the quality of the service through experience, “*experience*” quality, or will not realize the quality of the service even after having experienced it, “*credence*” quality (Van Looy, Van Dierdonck, and Gemmel, 1998). This puts the customer in a weak position, which he realizes, making him less inclined to be charged for services.

Moreover, buyers regularly use evaluation criteria, however, it is not always possible to precisely define service needs due to the difficulty and time constraint. Cost appears to be the central evaluation criteria for many service offerings, although it is not always the case. Some managers, when talking about complex service offerings of strategical importance involving high supply risk, expressed their willingness to evaluate the services based on their value rather than on the cost. For consulting services, softer criteria can be used such as creativity, flexibility or the ability to cooperate (Hünerberg, Hüttman, 2003).

Even though buyers recognize there is a reduction of the risks when using value-based payment mechanism, they are not always willing to pay a price or risk premium.

➤ Service offer

Product service solutions have some disadvantages for the customers. As Lindberg and Nordin (2008) explain, the purchase of complex integrated service offerings can be costly for customers. Those kinds of services can be very resource intensive and require developing relationships with suppliers as the specifications of the offering takes time to define.

It can become especially costly when unexpected failures arise, and negotiations need to be undertaken to solve problems. It is not always clear whether the benefits of integrated solutions can offset the costs incurred.

Furthermore, the more the solution will be integrated the more the more the customer will depend on its supplier. Although the majority of customers value long term relation-oriented procurement for complex services, some prefer to have transactional relationships whenever possible. In this case, the customer affinity with well-defined service offers is explained by their willingness to not be dependent or ally with a specific supplier and the cost incurred by governing relationships for complex services (Lindberg, Nordin 2008).

➤ Supplier's competition

Uлага and Reinartz (2011) add that the willingness of the customer to pay for a service might also depend on its function and the practice of competitors. For example, for product life cycle services and asset efficiency services, although both are built around customer products, their willingness to pay will vary. PLS are seen as an imperative by customers who, thus, have a low willingness to pay. On the other hand, AES are recognized by customer as the supplier going beyond its obligation and are distinctive from supplier core offerings, raising their willingness to pay, this can be also applied to process support services.

Simple, standard services are weaker in front of competition as buyers can easily compare price across the market to find the more affordable services. In that case, price can simply be calculated through cost calculation and the ability to calculate cost to be able to promptly answer customer's requests is advised for more integrated, tailored services (Rapaccini, 2015). Although, Lindberg and Nordin (2008) add that on some occasions, the buyer will take time to thoroughly specify its service needs, assigning a category team to the task, sometimes even involving suppliers in the process.

Clear specifications can then be used as a way to make offers made by the suppliers more comparable, thus, more open to competition.

➤ Buyer

The willingness to accept the higher price can depend on the person who is responsible for the transaction at the buyer's organization (Aitken, Paton 2016).

People at leading positions seems to be more inclined to accept it, as it is easier to talk about the added value of services. (Ulaga and Reinartz 2011). By increasing the understanding of the buying company's expectation when procuring services, the supplier can better assess with what kind of buyer they will deal with and what is its degree of specialization in the buying process (Valk 2008).

➤ Risk

Performance based pricing can be more advantageous for the buyer if they are facing high risk factors such as highly specific and innovative demand, a complex supply market or high financial implications through a single decision. If the buyer wants to reduce uncertainties as well as raising quality of the procurement, performance-based pricing is the best solution. On the other hand, the supplier should care about whether or not the risk factors involved when pricing through performance are within his control. If not, for example in the case output or contribution to profit is used as a variable, supplementary revenues are required to offset the risks (Hünerberg, Hüttman, 2003).

It seems that pricing strategies are not always deployed in accordance of the service strategies and that organizations are, sometimes, not able or not willing, to change it. However, it can be difficult to understand why it is the case. Although researchers reviewed factors impacting pricing practices, they tend to overlook the impact customers can have.

The factors that have been found in the literature to impact pricing strategy are synthetized in the diagram below (see Figure 3). This diagram will serve as a basis to compare the results from research.

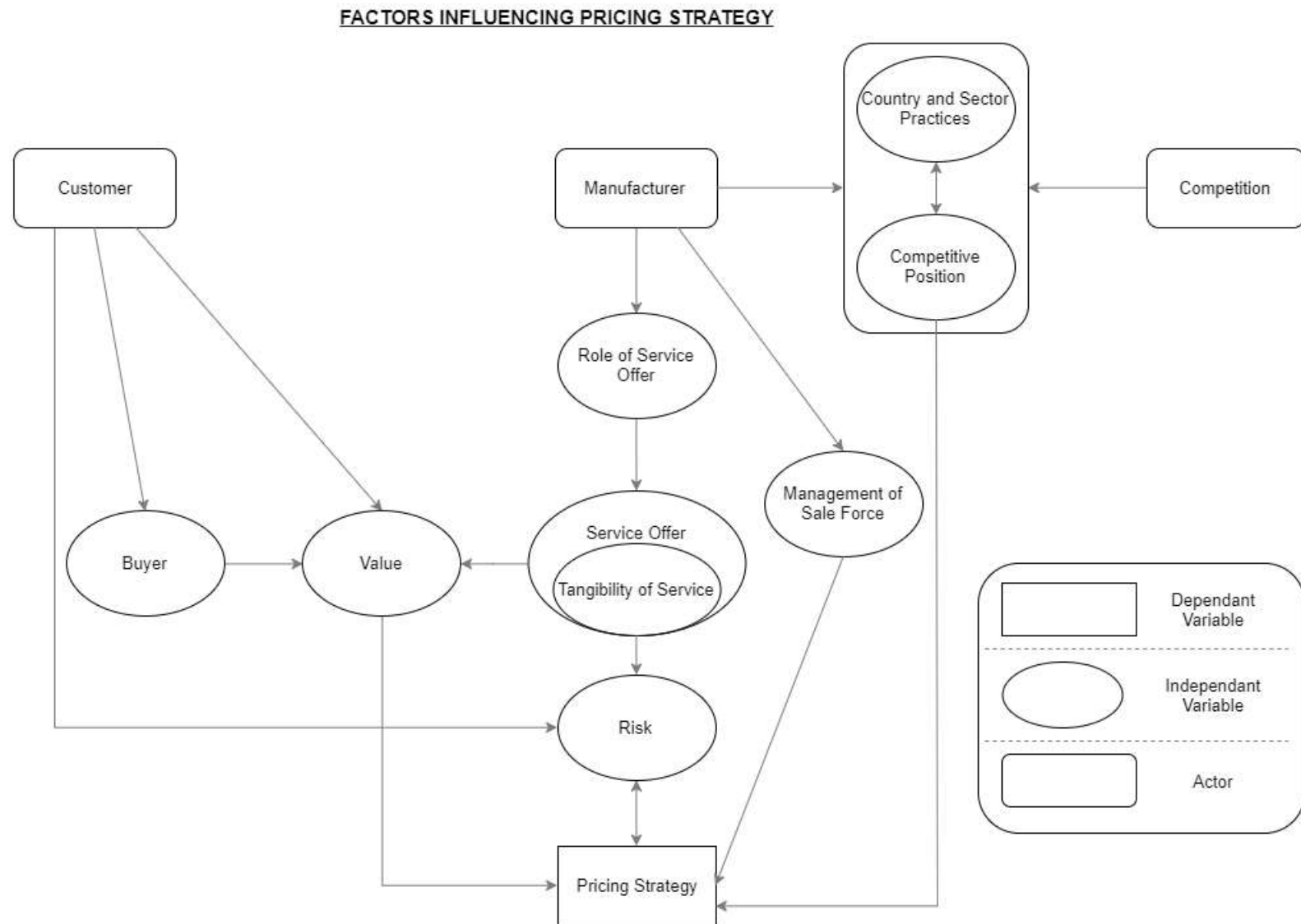


FIGURE 3: FACTORS INFLUENCING PRICING STRATEGY BASED ON LITERATURE REVIEW (OWN ELABORATION)

3. METHODOLOGY

Within this section, the methodology used to investigate pricing strategies in the machine tool sector as well as the factors impacting it, both from supply and demand perspective, will be reviewed. The first part will relate about the strategy used for the research and the second part will describe the methodology used to gather the data, and the techniques to analyse it.

➤ Research strategy

A multi-case study design was adopted in this research. Case studies are relevant when context plays an important role and the phenomenon to be studied will imply complex links within the organization of the supplier, and with their customers, imposing the need to be studied in a real-life context. Also, multi case searches allow you to execute in-depth searches about the phenomenon to be observed (Yin 2013) and to build richer theories (Yin, 1994), making it an appropriate tool to answer questions implying why, how and what.

The focus was made in a specific industry in order to avoid inter-industry variability (Wilson and Vlosky 1997). The machine tool manufacturing industry was selected as Copany (2014) affirmed that varied service offerings can be observed in the industry although not widely diffused.

Cecimo (2014) presents the machine tools as products having a critical role for their customers. Indeed, machine tools have a large impact on the competitiveness, efficiency of the production line, and, quality of their products. They are an enabling product needed for a large part of industrial production. Copany (2014) explains, machine tools represent complex products involving mechanical, electronic and technological characteristics, requiring from machine builders to be skilled in multiple disciplines. Because of the complexity inherent of the machines and the importance they have on customers' production it will make an interesting sector in the light of this research as the customer will pay attention to services and will probably not be able to do without them.

Copany (1014), assert that innovative pricing strategies are rather rare and sometimes associated with more simple services in the machine tool services. This observation goes against what has been deduced in literature (Anderson and Narus, 1995; Rapaccini, 2015),

which explains that simple services are more exposed to competition and often priced by costs or in regards of competition. Copany's (2014) assertion is supported by Azarenko and. Al (2008), who explained that, although result oriented revenue models are creating the highest revenues, this model's implementation in the machine tool sector is still rare. Indeed, product oriented models are being privileged in this sector. Because it seems that pricing strategies are not deployed accordingly to the service offer, the machine tool sector makes an interesting subject for this research.

➤ Case selection

This field study has two objectives: first, to learn about service providers and their pricing strategies and, second, to learn about what are the different factors that might affect it.

The investigation of manufacturers was done on European organizations with a focus on Belgian manufacturers for practical reasons. These organizations were found with Agoria and Europages research tools using the "machine tools" keywords. Agoria is a relevant means of searching as it is Belgium's largest employer organization and trade association and is active in the manufacturing industry (Agoria 2017). Complementarily, Europages was used to complete the list with European manufacturers (Europages, n.d.).

The goal here was not to perform an exhaustive list of European machine tool manufacturers but rather to select organizations that were thought to be able to fit the research's purposes. In that regard, only organizations that showcased at least some service offerings on their website were retained for this first selection process.

Ninety European manufacturers, of which 30 are from Belgium, were kept. Because of a lack of privileged access to machine tool manufacturers the contacts were made through the means available, first by mail, and then, for those who did not answer, by phone.

During the communication process, a second selection was undertaken with the help of questionnaires (See Appendix 1), through which three relevant factors retained from the literature review were examined. The criteria used for the selection came out of the literature review as critical in order to be able to distinct an organization that has developed a service

offer, in which customers have taken interest in, and a pricing strategy. Those criteria are presented below?

First, we looked at the importance of the service processes inside the organization, measured through the share of the revenue generated by services.

Since the revenues generated by the service offering should grow along with the organizations servitization processes (Marks et. al 2011), a high share of service revenue compared to product revenue can be a sign of an organization's advancement in its servitization process. It was thus relevant to this research to have participants with different levels of advancement in the servitization process as it could give the opportunity to compare more innovative pricing strategies with standard ones (Mallaret 2006, Oliva and Kallenberg 2003).

Second, we looked at the service adoption and coverage as proposed by Visnjic Kastalli, Van Looy, Neely (2013). These two measures are good indicators of on how a service offering is adopted by customers and how deep the relationship is between customers and suppliers.

A high service coverage and service adoption rate means that customers and the supplier often interact together, and it can be interesting to see how those interactions can affect the pricing strategy.

Third, looking at the pricing strategy itself. As the goal was to assess what variables can affect a pricing strategy, it makes sense to try to find organizations where they were observable.

Form the list previously established, 6 responded to the questionnaire. Such a low number can be partially explained by that fact that pricing strategy is a sensitive subject that an organization can have interest in hiding from competitors, customers or even potential buyers. Out of the 6 respondents, 3 cases, each situated at a different segment in the B2B value chains in which they operate, were retained.

- Merco Machine: a machine tool maker providing services for its own products.
- Gelderblom: An official importer for Okuma machines, provides services for the machines they sell.

- Pegard Productics: A service provider for machine tools. Although they used to manufacture their own machines, it is not the case anymore. Today services are performed both on the products they made and ex-competitors' products.

Through this heterogeneous sample, the research was able to look at the service offer and pricing strategies from actors with distinct reliance on services. Furthermore, those differences helped to highlight the advantages a manufacturer can have by providing services related to its own machinery and will also serve to underline the differences between an organization that lives off of services against an organization that lives off of products.

➤ Data collection and analysis

This research was done through an exploratory method of. By using a qualitative method of research, this study aimed to show the pricing strategy of servitized machine tool manufacturers and how the different factors that might influence it are experienced by the sample studied, in their own terms (Richie 2003).

Because of the research method, it was relevant to use interviews to gather the data to be analysed. Indeed, interviews are useful to discover what are the participant values, understandings, perspectives and experiences on a topic (The Open University, n.d.).

The interviews were done in a semi-structured way, there was no predefined questions but rather a list of topics to go through, in two rounds. For the pricing practices the list of topics was defined mainly based on Rapaccini (2015) research framework presented below (see table 1), which was adapted for the sake of this research (for questionnaire, see appendix 2).

Using semi-structured interviews gives respondents the space they wish, while allowing for comparisons between interviews when the same subjects are reviewed (Edward and Holland, 2013). While conducting the interviews the focus was placed on attempting to find out what happened and why (Rubin and Rubin 2005).

This method also allows the researcher to keep an open mind on the context and the outline of his research and to facilitate the theorization and conceptualization of the data collected (Bryman 2012).

The first round of interviews lasted between 1 and 2 hours and took place at the supplier's offices. The interviews were then synthesized into texts and cross analysed together, along with the theory gathered so far (see appendix 4), through an open coding method. Which is explained by Corbin and Strauss (1990) as being "*the interpretive process by which data are broken down analytically*", and is used to give an interpretation to the phenomena appearing in the data analysed. The different interviews were compared to try to find similarities and dissimilarities. The phenomenon data were grouped by category and then received concept tags. Through this process specific properties could be extracted from each category. Also, by comparing the data together, subjectivity and bias could be put away.

After reports were written, they were sent to the interviewees in order to ensure that the interview was understood correctly and that both parties agreed on the exactitude of the data gathered.

At the same time the open coding method revealed the topics that the interviews did not cover enough for certain suppliers and the topics that were not considered in the first place. This led to a second round of interviews, this time done through skype, the interviews lasted around 30 minutes each. The structure of the interview was a little less flexible in order to make sure to fill the gaps (see appendix 3). Again, the interviews were, synthesized, sent back to the interviewees and crossed analysed together with the theory through an open coding method.

<i>Dimension</i>	<i>Options</i>			
Pricing strategy	Cost-based: prices are set as cost-plus	Competition-based: prices are adjusted to meet market situation	Value-based: Prices are commensurate with the value impacts on the customer's business	
Bundling option	Unbundled service offering focused on transactional deals, such as in time and material contracts		Bundled service offering focused on establishing enduring contractual relationships with customers, such as long-term renting and leasing contracts, global service contracts, full-service contracts	
Revenue models	Traditional (effort-based)		Innovative (use- or outcome-based)	
	Price list, pay-per-instances	Fixed-rate fees, all-inclusive (flat) fees	Payments are based on the achievements of operational performances. Gain-loss sharing agreements can be eventually adopted	Payments are affected by customer's financial results, gain-loss sharing agreements are necessarily adopted.

TABLE 1: RAPACCINI RESEARCH FRAMEWORK (2015, P.125)

4. PRESENTATION OF RESEARCH CASES

➤ Case A: Merco Machines

Merco Machines is a small/medium-sized Belgian machine tool manufacturer based in Merelbeke and founded in the late 1970s by Marc Mertens. They employ around 55 people, are specialized in the manufacturing of steel drums machine tools and machines aimed at reconditioning steel drums, their best-selling product is a production line to manufacture 200L steel drums¹.

Merco Machines mainly offers product life cycle services such as, refurbishing, installation, testing, spare parts, remote monitoring, they also offer asset efficiency services such as commissioning² and post commissioning. Their service offer is only sold to their customers. All of Merco Machines customer procure themselves, at least, part of their service offer. Service revenue accounts for around 20% of their total turnover, although Merco Machines' goal is not to live out of services. Their service offer has been growing along the years in response to customer's needs.

Merco Machines sells their products all around the world except in China, Europe accounts for 65% of their revenue.

Their goal is to maintain long term relationships with their customers, provide quality products (a way to distinct themselves from China), and foster cooperation.

The interview was held with Mr. Jeroen Braquez who is the project sales manager and is in charge of sales and services. His main mission is to translate the needs of clients to technicians.

¹ <http://www.merco-machines.com/steeldrums/production-lines-for-new-steel-drums>

² Commissioning process comprises the integrated application of a set of engineering techniques and procedures to check, inspect and test every operational component of the project, from individual functions, such as instruments and equipment, up to complex amalgamations such as modules, subsystems and systems. ("Project Commissioning", n.d.) Post commissioning is performed by Merco Machines once the machine has been first commissioned and used for some time.

➤ Case B: Gelderblom CNC Machines

Gelderblom is a small/medium sized organization with around 30 employees. It is the official reseller of machinery manufactured by Okuma in the Benelux. Okuma is a Japanese machine tool manufacturer whose headquarters are located in Oguchi-Cho, Aichi prefecture and manufactures different types of machinery such as: multitasking machines, lathes, machining centres and grinders. Gelderblom's best-selling machine is the Okuma LB3000II³, a horizontal lathe.

It is Gelderblom which developed the Benelux service portfolio. It is mainly composed of product life cycle services, such as installation, spare parts, testing, documentation, retrofitting, a hotline, and, asset efficiency services such as, pre-reception testing, training and product line automatization.

The organization sees itself as a solutions provider with an added value rather than a product seller. Over time the amount of machinery sold has decreased and the percentage of revenue stemming from services has increased and today represents around 65% of their total revenue. More and more people have been coming to Gelderblom seeking complete solutions rather than just a machine. Gelderblom will provide services only on their own products.

Today, Gelderblom sells fewer machines than they used to, but the cost of projects has been increasing. As with Merco Machines, services offered by Gelderblom have been growing in the past years due to the demand of their customer base.

Okuma's dealers in Europe also have access to a showroom in Germany where they can do pre-installation testing and they can show the customers their capabilities.

The interview was held with Mr. Wim Bogaerts the sales manager of Belux who's responsible for sales and services.

➤ Case C: Pegard Productics S.A.

Pegard Productics is a small to medium-sized machine tool service provider. Pegard used to manufacture machine tools but stopped 7 years ago, constrained by a discordance between

³ <https://www.okuma.com/lb3000-ex-ii>

the market and Pegard's strategical objectives, and the global 2008 crisis. While the market was going towards lighter, faster and more flexible machines, Pegard decided to bet on more robust, precise and costly machines. Most of their machines were dedicated to customer needs and were almost all unique. The size of their organization didn't allow them to manufacture machines anymore. Pegard now employs around 20 people separated into two divisions, mechanics and machining.

Pegard only offers product life cycle services such as, spare parts purchasing, spare parts manufacturing, reparation, urgent interventions, maintenance, retrofitting, calibration.

One of their strength is that they have a machine park specialized in machining that allows them to make any type of part, constituting a big competitive advantage regarding reactivity on reparation of machines as Pegard will be able to directly manufacture spare parts if needed.

Pegard services are aimed at all type of machine tools from all brands and to any applicant, former Pegard machine owner or not. They also still perform services on the machines they used to manufacture. Customers often come to Pegard because maintenance or reparation is too complicated for them, their machine tool providers don't support them anymore or they can't identify the problem. With their deep knowledge and capacities, Pegard often constitute their customers' last resort.

5. PRESENTATION OF FINDINGS

The interviews were done with three different types of service providers related to the machine tool industry. Case A is a manufacturer, Case B is a retailer and Case C is a service provider that used to be a manufacturer.

First a preview of the findings is represented through graphs in order for the reader to be able to get a quick overview of what was extracted from the interviews. Then, the service offer of the organizations will be presented. Analysing the service offer and dividing it into categories from Tukker (2004) classification will help to highlight how the service offer can impact the pricing strategy (Kindström, Kowalkowski & Sandberg 2013; Grönroos 2011; Oliva & Kallenberg 2003; Mallaret 2006). Then the pricing strategies, the bundling schemes and the revenue models reviewed under Rapaccini research framework (2015) will be described. Afterwards, the different factors that can influence the previously presented components of the pricing will be examined. In this last section both the point of view of the customer and the supplier will be examined separately to assess the ability of a service supplier to set innovative pricing strategies.

5.1. Findings preview

This section serves as a preview for the ideas extracted from the interviews and gather 8 indicators. 1 is for the pricing strategies and the others for the factors impacting it. Each time to extreme positions, that serve as a scale of comparison, are given. Those are explained just below.

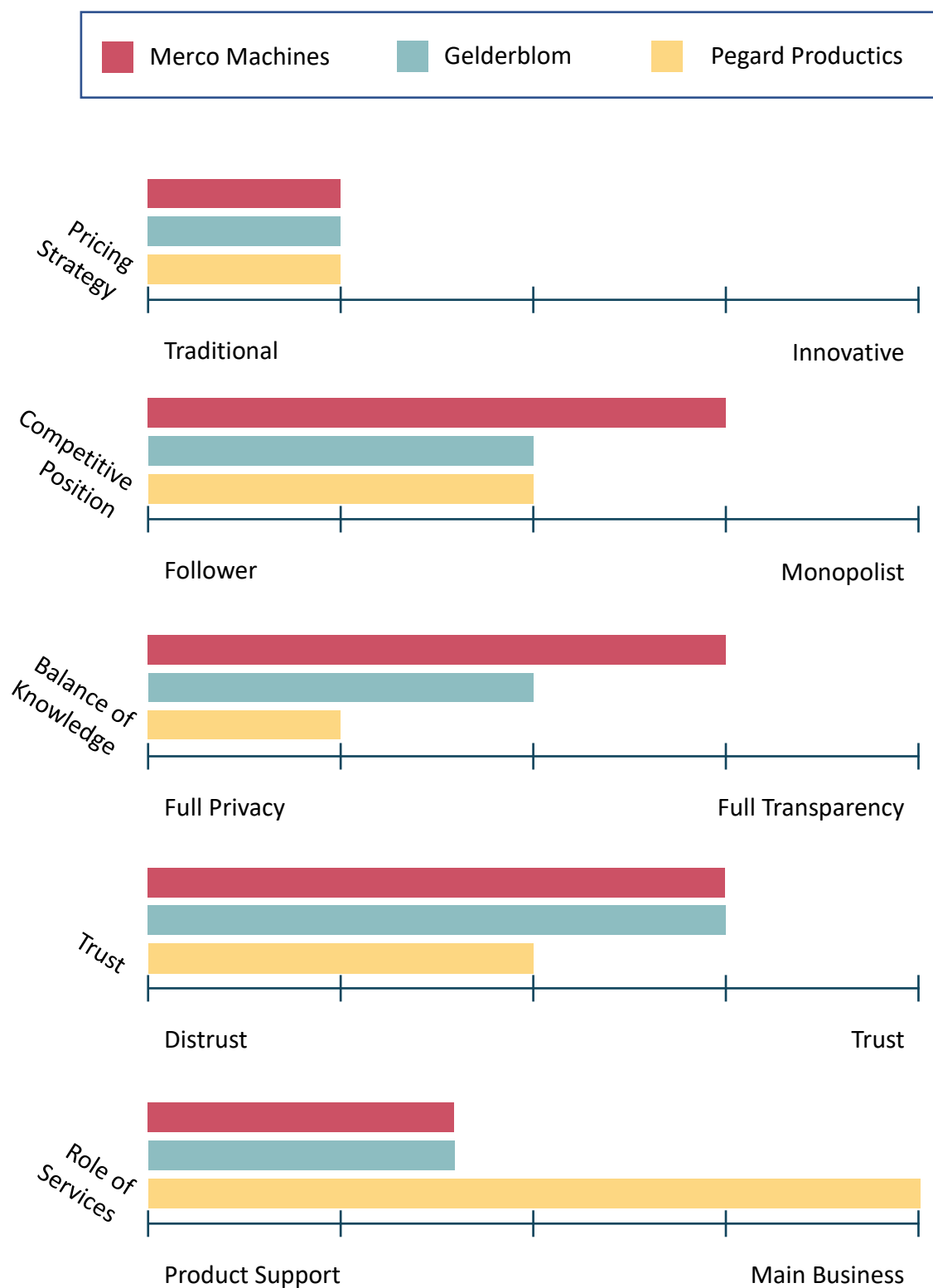
- ❖ Pricing Strategy: Integrates the pricing strategies, revenue models and bundles used by the service providers. *'Traditional'* is when pricing strategies and revenue models are cost based, and bundles are standardized. *'Innovative'* is when value based pricing is used, and the suppliers provide complete product service solutions
- ❖ Competitive Position: Looks at the supplier's competitive position in the market he operates, based on several factors such as the size of customers, number of competitors and potential customers, or relation with customers. (See appendix 3 for the criteria used to assess competitive position). *'Follower'* is when supplier operates

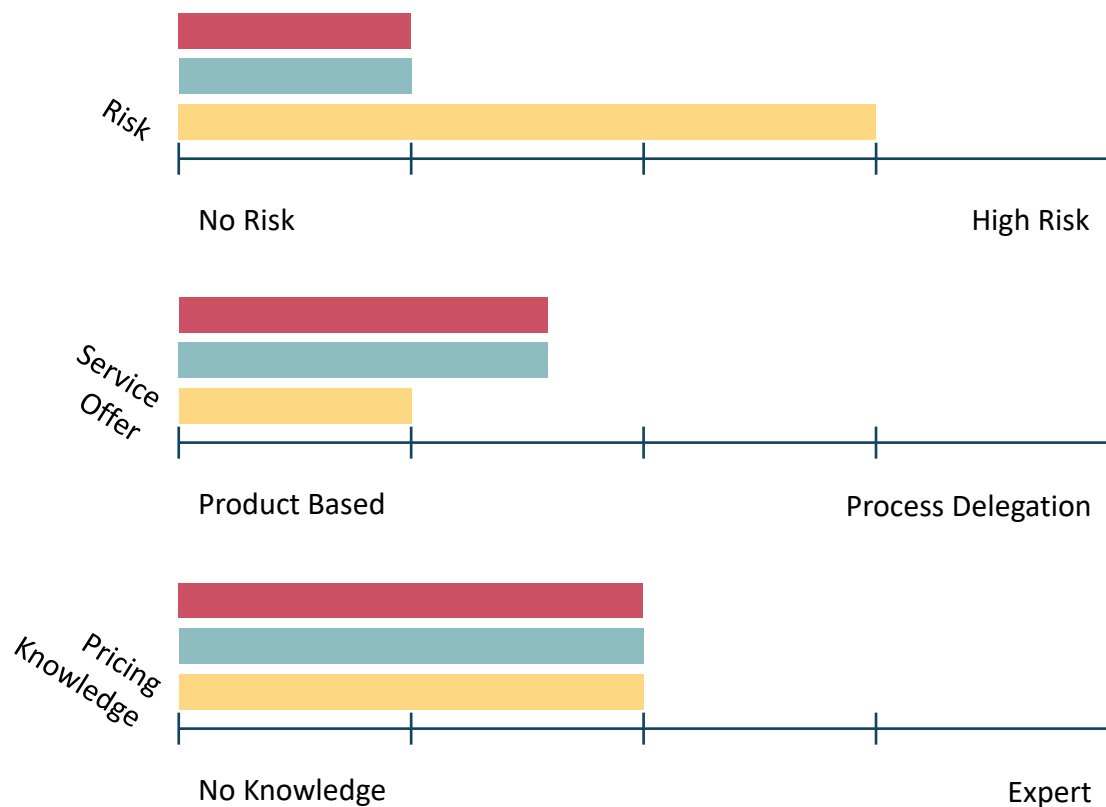
in a perfect competition setting. *'Monopolist'* is when supplier is alone on the seller market.

- ❖ Balance of Knowledge: Assess how transparent is the supplier with its customers about its pricing strategy. *'Full Privacy'* is when no detail, such as hour rates or decomposition of price is given. *'Full Transparency'* is when supplier is completely open about what customers are paying for.
- ❖ Trust: Assess the level of trust that a customer has regarding service supplier capabilities. *'Distrust'* is when customer do not believe in supplier's capabilities to provide services. *'Trust'* is when customer has complete trust in supplier's capabilities to provide services and do not need to be convinced about it.
- ❖ Role of Services: Assess the role service offer plays for the supplier. *'Product Support'* is when the supplier uses services only because it will facilitate a sale. *'Main Business'* is when the supplier sees the service offer as end in itself.
- ❖ Risk: Assess the level of risk a supplier takes when offering services. In this case, risk incorporates, financial risks linked to the provision of services. *'No risk'* is when the supplier takes 0 risk when providing services. *'High risk'* is when the supplier service offer incur a lot of risk for himself.
- ❖ Service Offer: Assess the variety of services offered by the supplier. *'Product Based'* is when the supplier only offers product life cycle services. *'Process Delegation'* is when the supplier offers all kind of services, from product life cycle to process delegation services (Ulaga and Reinartz, 2011).
- ❖ Pricing Knowledge: Assess the knowledge that the supplier's sales staff has about innovative pricing strategies. *'No Knowledge'* is when the supplier has never heard about other pricing strategies than cost based. *'Expert'* is when the supplier is well aware of innovative pricing strategies, their inconveniences, and benefits for the supplier and the customer.

The values used for each indicator should be considered as a way to give a general idea of the position of an organization, both on the scale given and compared to the other cases. Those values were extracted from the table used to cross analyse theory and cases of this research (see appendix 4). Those indicators are subjective indicators as their values include some of my personal perception and evaluation from the interviews and exchange with the different

cases analysed (Rammstedt, 2009). Values were set by using relative scales comparing how each player compared to each point and against the two others.





5.2. Presentation of findings

5.2.1. Service offering: early stage of servitization

The three organizations' service portfolios focus mainly, if not only, on product life cycle services. The most common services observed are maintenance, spare parts and retrofitting. Although, the fact that Pegard is not a manufacturer might limit the range of services it can offer. Indeed, some services such as installation and testing, are often taken care off by manufacturer by obligation, and are one-time services that will not be needed in the future.

Merco Machines and Gelderblom also offer asset efficiency services. Both propose commissioning. Merco Machines, in addition, offers post-commissioning, and Gelderblom's customers are obliged to take a five days training when buying an Okuma machine. In addition, Gelderblom's service portfolio includes the opportunity for the customers to automate their production lines. Other than training and post commissioning services that are adjusted to customer needs and automatization that will depend on the production line of the buyer, the services proposed by the organizations are standardized.

None of the organizations interviewed offers process support services or process delegation services. This shows that the service providers in this case are still at an early stage of their servitization process as their services mainly focus on the products rather than on the use the customers have of their machines or the results they are aiming at.

5.2.2. Components of the pricing strategy

➤ Pricing strategy: Input and competition based

The most common pricing strategy observed was the cost-based strategy. For the spare parts, for example, the three organizations used the cost of the material and the price required for the technicians to manufacture it based on hour rates. Training, commissioning, post-commissioning services prices were only based on the hourly-rates of the technicians, which comprise the margin.

Pegard Productics pricing strategy varies in function of the service they provide and forms the only case analysed using a competition-based pricing strategy. It is used for almost all of their services, except for urgent reparation services, which are priced according to a cost-based pricing method for which the margin they take is higher than what they usually do. When using competition-based pricing, Pegard Productics will try, for example, to challenge their hourly rates, or the time needed for an intervention in order to stay competitive.

It appears that pricing strategy is not always a point that is given much thought about. In the case of Gelderblom for example, they decided to make their hotline available 24 hours a day, seven days a week for some of their customers. Customers receive 10 stamps for 500 hundred euro and they can call 10 times outside of the normal hours to solve their problems with a technician. In this case, the price was defined arbitrarily. They had to put a cost on it and it was done without computation, but just with the idea to give a little extra to the technicians that will be on duty, to motivate them.

Again, this can be a sign of an early stage of servitization as, in this case, the true value of the services is not realized, even if the service providers might be aware of it, because he is just not willing to do it.

➤ Bundling options: Standard bundling

All the cases reviewed are using bundling in their pricing strategy. Cases A and B have a set of services that are always bundled with the sale of a machine, it is their standard bundle. Merco Machines always imposes to the buyer that Merco Machines themselves performs the commissioning and post-commissioning services and, therefore, are included in the general terms of purchase. It is a similar case for Gelderblom which always bundles with their products, installation and training. For both, the fact of whether the services are bundled or not will not affect the price.

The choice of Merco and Gelderblom to bundle those services with their products comes from their willingness to ensure that, the product will run as they should and thus, that the customer will keep a positive image of their solutions. As Mr. Bogaerts emphasized, if a customer receives a machine but is unable to solve any problem that might occur, this might affect the opinion of the customer, hence, Gelderblom imposed a five-day training to every new customer. Along the same lines, Merco Machines will not grant a warranty to customers who do not accept the imposed services. Moreover, by imposing training, they can reduce the total cost of ownership on their customers, indeed the five-day training will be less costly than if the customer had to request the intervention of a technician for every issue.

On the other hand, Pegard Productics sees the bundles as an opportunity to better spread the activity of its assets, such as employees or machine park, and flatten the peaks throughout the year. Pegard's standard bundle is a maintenance contract of several years to which they try to include other services such as spare parts, calibration or reparation. For bundled services, they are readier to lower their price as a contract will lock the customer into the offer and should ensure their activity for several years.

Those maintenance contracts are a way to obtain more service procurement from the customers, indeed it creates intimacy with the customer, allowing Pegard to maintain better contact with their customers. Also, when maintenance is performed, the technician will be able to look at the needs of the customer in the future. He can advise him on when it will be time to do a calibration or to order change parts for example.

➤ Revenue model: Traditional

All the three service suppliers have a different approach about how they make their customer pay for their services.

Case A always uses hourly rates to compute the price of their services for their clients. They are very transparent about it, when signing a contract, for each service, the customers will receive a price that is an estimation of the time the service will take, multiplied by their hourly rates. This stems from the willingness of Merco Machines to stay as open as possible with their customers.

On the other hand, Gelderblom, for the services imposed when buying a machine, include their prices within the price of the machine. It is a way for them to make it clear to the customers that those services are required at purchase. For their other services, they either use fixed prices or hourly rates depending on the job and the risks involved. Although the prices of some of their services are included in the price of the machine, their revenue model is still transparent.

Pegard Productics, had three different scenarios when speaking about payment mechanisms, both depending on what is at stake, both for them, and their customers. Their usual payment mechanism is a fixed price based on an estimate of the costs. This price will not change, if, taking the example of a maintenance service, it takes longer than what Pegard predicted it is at their loss, if it takes less, it is their gain.

On the contrary, they use hourly rates for urgent interventions, because of the customer's readiness to pay, in order to repair a machine that is of critical importance for them, is higher than usual, and he will not pay as much attention to the price as he usually would. The revenue he is losing while his machine is not running mitigates the attention he would give to the price of a service.

Pegard Productics are not transparent with their customers when speaking about their pricing methods. Usually, the customers will not receive the details of their pricing. Mr. Bolle explained that there are two cases where he is ready to discuss prices in detail, when the contract at stake is particularly important for Pegard and the customers require to know the details, and, when Pegard knows for sure that they have the best price on the market.

5.2.3. Factors influencing the pricing strategy

➤ Role of services for the service provider

The cases analysed have different visions on how the services played a role for their organization. Indeed, Case A uses pre-sales service as a way to allow sales and provide them for free. In other words, they are seen as an investment in a long-term relationship. In the same way, post-sales services, are used as a mean to maintain long-term relationships, meeting the needs of their customers.

Those services are provided with either a small margin or at cost. Refurbishing of machines for example is done at cost and are only provided to make the customer happy. Merco Machines is not interested in capturing bigger margins from services, in Mr. Bracquez words: "I don't see it as my role to sell as many services as possible to the client, I just try to capture his needs and answer his questions with services".

In the same way, Gelderblom does not look at services as a means to capture margin: "We try to separate (read distinguish) ourselves from the rest of the market, our business is to sell machines and solutions and our business is not to make our living from spare parts and services. There are other machine manufacturers that sell at rock bottom prices and they make their margins on services. That is not our approach".

Again, with Gelderblom, depending on the importance of a spare parts and the time of occurrence, if an emergency occurs at a customer's place, Gelderblom is ready to go to extra lengths to deliver spare parts as soon as possible in order for the machine to get running again. This might incur extra cost, as Mr. Bogaerts explained, a salesman might be doing 300 kilometres to deliver the spare parts in a short time. That extra service might not be incorporated into the price of the service as it is done rather in order to satisfy the customer.

On the contrary, Pegard Productics offer of services constitute their only source of revenue and is an end in itself. In that regard, their attitude toward services and services pricing is different. Indeed, Pegard will try to capture bigger margins on services when it can, as it is the case for their urgent intervention service or the procurement of hard to find spare parts.

Because Case A and B see services as a way to facilitate the sale or to maintain good relations with their customers, their main focus is still on trying to sell machines. They do not want to see services as a way to extract bigger margins and thus do not see the benefit in introducing value based pricing. On the contrary, when they are able to, the people at Pegard Productics try to capture bigger margins and adapt their pricing strategy.

➤ Competitive position

The three cases have different competitive positions. Merco Machines operates in a niche market where it is the leader and the biggest supplier. Except for China, of which they have no knowledge as they try to avoid the copying of their products, Merco Machines has four competitors around the world, and, all together they share around 130 potential customers of which around 40% are in the United States, 30% are in the EU and 30% are in Asia. The median customer is around one and a half times their size and because there are few of them, all their customers count. Therefore, Merco Machines cannot afford to lose any.

Gelderblom on the other hand operates on a bigger market, with around 700 potential customers and a numerous fleet of suppliers that customers can procure from. Competition is high in the market and, as for Merco Machine, their median customer is slightly bigger than Gelderblom itself. Altogether, both Cases A and B have a large variety of customer sizes.

Pegard's median customer is an organization of around 100 persons, which is substantially bigger than Pegard Productics itself. Their customers are on average bigger than them. Pegard has few competitors on the market but their customers are their main competitors because they are big organizations and they often have their own service maintenance. Pegard will almost always be called whenever the customer has tried to solve its problem or do its maintenance himself without succeeding. Pegard has few customers, but they all are important, 10 of their customers represent 80% of their total turnover and the rest is shared among around ten customers. Every customer is, thus, of non-negligible importance.

All of the three cases reviewed have a service portfolio including simple services. They are straight forward, and it makes it difficult for the manufacturers to set up innovative pricing strategies. Indeed, it is very easy for the customers to sort out the prices of those kind of services, providing them with the ability to easily compare prices among competitors.

Because of this position, the suppliers feel that, by trying to set new pricing strategies and, thus, increasing their margin on the service provision, as they all implied, the customers will leave for the competition.

Merco Machines, being in a better competitive position than case B and C, has the ability to fix the prices according to the hour-rates for all their services. This will allow the supplier to be paid in function of the value of the work they have provided. This can profit the customer too, when using fixed prices by intervention, as Pegard does in most cases or as Gelderblom does sometimes, the customer can find himself paying for more than what they got. If, when taking the example of a reparation intervention, the work takes less time than expected in the computation of the price, the difference will be kept by the supplier. This works also the other way if the reparation takes more time than expected, the supplier is working extra hours without getting paid.

This is confirmed by Pegard's case. For almost all of their services, customers pay in function of a fixed price. Pegard's services are standardized and vulnerable to competition as they are easier to compare. The only service using hourly rates is the urgent interventions. In that case, the opportunity cost is in the mind of the buyer, as said above, and this opportunity cost is related to time constraints. Because the customer will want the service provider to be reactive, the competition on price is reduced. They have less time to compare the offer of Pegard's against their competitors. This doesn't give all the power to Pegard, as their goal is still for the customer to keep a positive image of their service offer afterwards.

The intensity of competition will also vary depending on the size of the buyer's organization. When facing large companies, which have developed purchasing departments, there will be more competition as they will take the time to analyse the market. Moreover, the purchasing department will usually try to cut the costs on services. This leaves less room for the service provider to propose innovative pricing strategies on simple services. On the contrary, when dealing with small organizations, they might have less time to dedicate to the purchasing function.

Moreover, small organizations tend to give more importance to services as their dependency on the machine is probably high. As, Mr. Bogaerts explained, some of their customers only have one production line depending on two machines, thus, generating all their production.

The impact that a machine breakdown will have on small organizations will be higher than on a bigger organization that can compensate for the interruption of a production line, or use another machine.

The use of bundling can be a way to reduce the supplier's vulnerability to competition. It is the case for Pegard, which uses bundles to offer maintenance contracts of several years. This allows them to better spread their activity along the year, but, it will also lock the customer into their service offer, and, through this bundle, they will be able to push the sales of other services.

As we can see, the competitive position has different ways to influence the pricing strategy. Simple service offers, because they are highly comparable, will be weaker in front of the competition, making it difficult to raise margins. On the other hand, services that are to be provided in an urgent situation will be less inclined to be vulnerable to competition due to time constraints. Also, the size of the organization of the buyer will affect the buyer's ability to negotiate service prices and his willingness to procure services as a machine failure have different ways to impact organizations of different sizes. Lastly, bundles can be used as a way to keep market shares and push for a more complete service offer.

➤ Risk integration

Some services, such as reparation, can include some risks, which will have an impact on the pricing strategy. The notion of risk is well highlighted by the situation of Pegard. When a reparation service is requested, first, they open the machine although they might not be able to mount it back. Second, most of the time, when Pegard arrives, the customer has already received a spare part from their machine tool supplier. In that case, they take the risk of mounting the part but not solve the problem because, they might not be able to reproduce all the tweaks of the manufacturer, or, the spare part replaced might not be the origin of the problem. If the problem is not solved or the reparation took longer than expected, Pegard will not be compensated for the resources deployed. On the other hand, when using fixed list prices for services, if the resources needed were bigger than estimated, Pegard will not charge extra to the consumer. As Mr. Bolle said, "Customers have to understand that Pegard takes way more risk than if they were working on a machine they did build". Also, when accepting

to try to repair the machine, but in the end don't succeed, the customer might be lost for all future services.

This risk can be mitigated through the pricing strategy, as it is the case for Pegard. To do so, they start from the estimation that they have, every year, more or less the same amount of risk, and integrate it directly in the cost computation through higher margins or higher hourly rates. Thanks to this solution, Pegard can spread risks evenly among all its customers.

For Merco Machines the risk is integrated through the revenue model by making the customer pay for the number of hours the service required. As, beforehand, the customer only receives an estimate on the price, if the task takes longer than expected Merco Machines has the choice to make the customer bear the costs. Although it will not always be the case if Merco Machines estimates that the difference of time between the estimate and reality is their own fault. Through this system, Merco Machines assert that they take no risk by providing services.

There is also a notion of risks for customers. Indeed, when taking the case of a reparation, the customer will consign its machine in the hand of the service provider. The risk comes from the supplier selection. A supplier might oversell its capacities in order to gain a service contract or a customer, although he is not totally sure he is capable of solutioning the problem. A customer that feels that he is taking risk will be less willing to pay for services.

Manufacturers have a knowledge advantage over service suppliers allowing them to provide services at a reduced risk. This risk can be mitigated through the pricing strategy or the revenue model, by better spreading the risks among the customers, or, by almost entirely transferring it to them. Customers, also face risks by selecting a service supplier for his needs.

➤ Balance of knowledge

Service providers will take into account the balance of knowledge between them and their customers in order to set their pricing strategy. The knowledge that is shared between the two parts will impact the pricing strategy.

In a relation between a customer and a service provider where there is few space to hide information, to capture bigger margins on services or to adapt a pricing strategy to specific

customers might be difficult. For example, for Merco Machines, which operates in a niche market, it is difficult to hide information. In such a market, information circulates fast and customers know one another, thus, when trying to charge higher margins to certain customers a supplier might impact the relation he has with them.

Conversely, a customer who does not share information about his business makes it difficult to know the true value he will extract from the services. When speaking about value based pricing strategy Mr. Bolle explains: "In our case, in maintenance services, I don't see what we could do, the problem is, it is very rare to know how much our customers earn from production". This is a difficult information to assess in the machine tool industry, because, depending on the machine there are different hour rates and a large number of production possibilities. He adds: "A good indicator though is the pressure from the customer to see how embarrassed he is to not be able to use the machine".

Equally, Pegard does not reveal how they price their services in detail, except for exceptionally big contracts. Indeed, they might not be competitive on every component of their pricing strategy, revealing it to the customer will make the price weaker in front of negotiations. Although, in certain cases it might be in the organization's interest to reveal its prices. As Mr Bolle underlined: "If you know that you have the most competitive price on every component you should reveal it".

When he can, a service provider might take advantage of an unbalanced knowledge relation. For example, Pegard, who offers a spare part procurement service profits from the fact that some pieces are very hard to find. They know they might be the only ones to be able to procure some very specific parts and will, thus take a bigger margin on the service. For normal parts they take usual margin.

The case of Pegard highlights the advantages a manufacturer might have in developing its pricing strategy. Indeed, a manufacturer is more implicated in the business of its customer. Especially when offering integrated solutions, he knows the needs of the customers as he was there at the beginning to design and propose a machine that will fit the customer's needs. An organization that is only a service provider does not have this advantage as it comes a posteriori, he might not even know what the customer manufactures.

The market in which the supplier is competing will have an effect on the balance of knowledge. In small markets, information is difficult to hide, fostering the use of standard pricing strategy for service offers fought over prices. In the same way, a customer that is not ready to disclose information about business will make it hard for the supplier to capture the true value that its services create for the customer, blocking the way to a value based pricing. On the other hand, the ability of the supplier to hide information from their customers will allow them to capture bigger margins.

➤ Trust

The notion of trust can have an impact on the pricing strategy. This notion of trust can relate to the relationship between the customer and the supplier or the trust a customer gives to a supplier's capabilities.

When speaking about the trust a customer has in a supplier's capabilities, the manufacturer begins with an advantage compared to an organization that is only a service provider. Indeed, a manufacturer, in order to convince its customers, has something to show. In the case of Gelderblom; it's a showroom based in Germany, and for Merco Machines; it is their worldwide network of customers. Thanks to this, they can demonstrate their capabilities to their customers to facilitate the sales.

Whereas, in this regard, Pegard might be at a disadvantage, the customer might consider that he is taking a risk by accepting a contract with Pegard as he doesn't have a clue of the quality of their work. Also, even a posteriori, the quality of the service procured might be difficult to identify. This is especially true for the maintenance services, where the customer might not be able to see the difference between before and after the maintenance was done.

Also, if taking the example of a new potential customer, they might consider that Pegard is taking some risks when accepting to perform complex services. Because Pegard lives off of services, they might oversell their capacities in order to try to acquire a new customer. This will make Pegard more open to competition. In order to convince the customer, Pegard might have to compete on prices.

Another advantage of the manufacturer comes from the customer favouritism towards the organization that has manufactured the product they acquired for complex services. When a reparation is needed for example, the customer will favour the manufacturer because they trust their knowledge about their own product. As Mr. Bolle gave the example: “If I buy a BMW, I would rather go to a BMW shop to get my car fixed”. In that case, as for the BMW example, people might be less concerned about price to ensure their product will work properly. This however might not be the case for simple services, such as spare parts or maintenance, as it requires less complex knowledge, making it more vulnerable to price and competition.

This was confirmed by Merco Machines, which is not aware of any customers providing services from third party service providers and Gelderblom, which has heard of customers procuring simple services to competitors in order to get a better price, but always coming to Gelderblom for critical services.

Moreover, when taking the choice to be very transparent with their customers, Merco Machines creates long term relationships with their customers. In exchange, customers also openly share critical information about their business. This relation of trust allows Merco Machines to have some freedom on their revenue model.

By being able to show its products to a customer, he can become trustful in the manufacturers ability to provide services. This will give the manufacturer an advantage on its own product regarding its competitors, allowing him to have more freedom in its pricing strategy. Moreover, building open relationships with customers will foster the trust between the two parties.

➤ Service offer

The pricing strategy is impacted by the types of service that are offered. In the cases reviewed, all the organizations proposed simple, often standard services. Standard services will “block” the service provider into classic revenue models and pricing strategies. Truly, taking the case of Gelderblom -as their service portfolio is composed of simple services, it is an easy task to compute the cost that they incur by the manufacturer. Hourly rates seem to be a common knowledge on the market, and as Mr. Bogaerts emphasized when speaking about the

installation of a machine: “Everybody knows, what it costs to rent a crane, or a truck needed to install a machine”. Because the customer knows what are the components of the costs and that those components are easy to compute, it is difficult for the manufacturer to justify an increase in the price.

➤ What is a pricing strategy?

The vision that the employees have of a pricing strategy of an organization will have an impact on their will to offer innovative pricing strategies to their customers. Indeed, what often came out of the interviews regarding pricing strategies, is that value based pricing could be implemented. However, the staff interviewed did not think that a different pricing strategy will benefit their organization and see pricing strategy as a trick to raise margins. In Mr. Bracquez words: “We want to hide as least as possible to our customers. We could easily take this (speaking about pricing strategy) to another level, but we don’t see the benefits out of it”.

If benefits of the pricing strategy are seen with a rather unilateral point of view and benefits of services for the customers are not considered, it might be hard for the service supplier to develop its service offer to anticipate needs of the market or set up new pricing strategies.

5.2.4. Factors diagram

From the diagram representing the factors influencing the pricing strategy (see Figure 3), the findings of this research bring several changes. First of all, the findings link the relation between the customer and the supplier on two levels. The balance of knowledge, and the relation of trust, both impact the pricing methods and each other. Second, to the management of sales force, the findings add that their knowledge about pricing strategy will play a role as well.

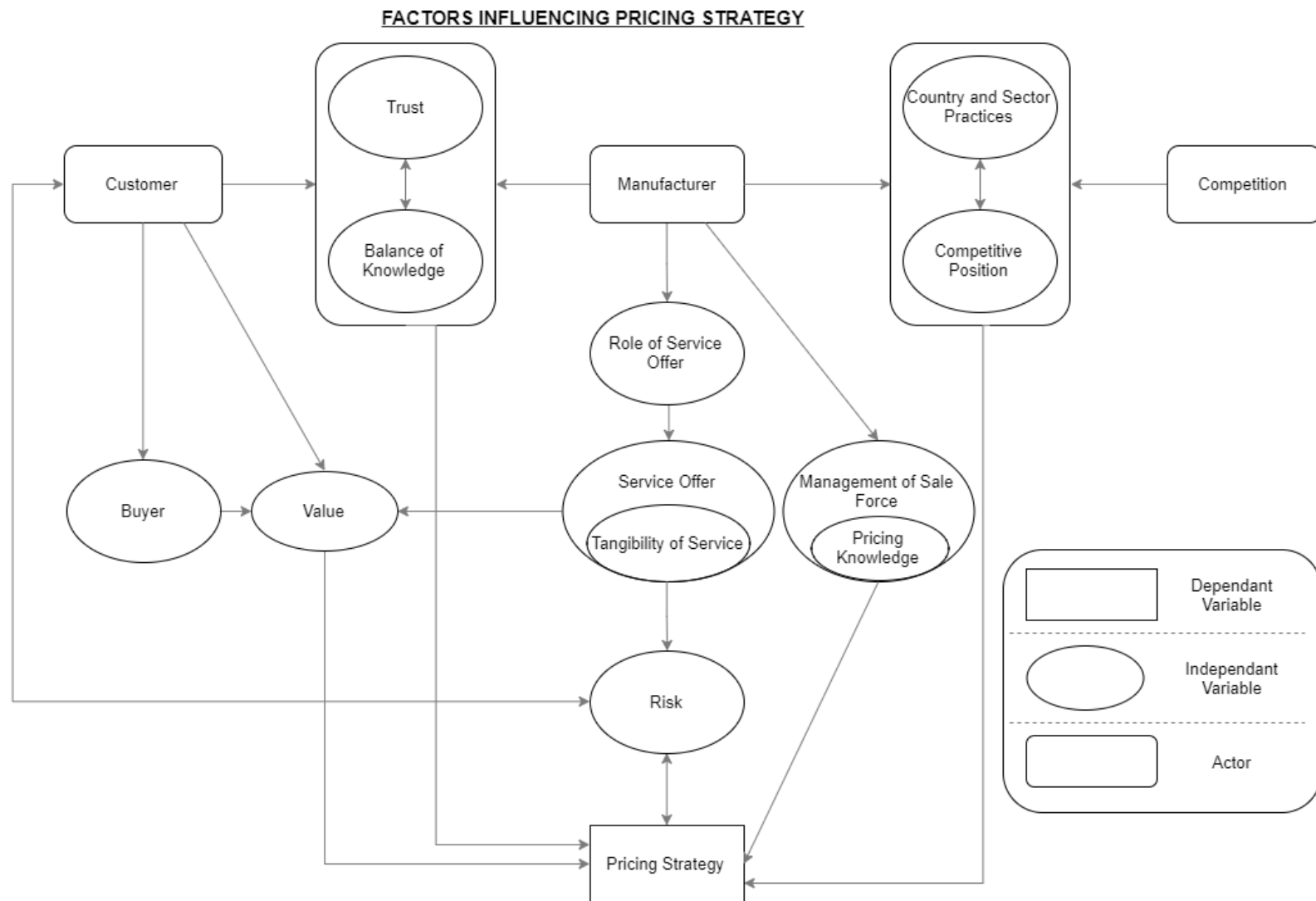


FIGURE 4: FACTORS INFLUENCING PRICING STRATEGY (OWN ELABORATION)

6. DISCUSSION

In general, the results extracted from the data gathered are in line with extant literature. In this section the literature will be compared with the findings from this research. Points in common will be established, while differences with previous findings will also be highlighted.

In the line of Kindström, Kowalkowski & Sandberg (2013) assertion the pricing strategies were all traditional, confirming the affinity of the manufacturing sector with cost based pricing.

Confirming Ulaga and Reinartz' (2011) and Malleret's (2006) theory about the impact of the role of services on pricing strategy, it was witnessed in the cases reviewed that product life cycle services are used by the manufacturer and retailer to allow the sale and that they tend to become standardized. Also, both the manufacturer and the reseller in our case, do not want to see services as a way to extract benefits and offer them with low or no margin, allowing the customer to reduce its total cost of ownership.

This research agrees with Rapaccini (2015), when speaking about bundling, that organizations at an early stage of servitization will use bundling, not as a strategic intent to grow the value created for the customers, but as a way to lock in customers and foster penetration while offering discount prices. Furthermore, bundles will allow to increase service coverage and better spread the activity of the service provider to optimize the use of its assets (Oliva & Kallenberg, 2003), such as Pegard is doing.

Thanks to the variety of actors used in the analysis, the advantages, advanced by Oliva and Kallenberg (2003), a manufacturer has in offering services to its installed base where confirmed. Indeed, they have first-hand access to technical information about their own products, or to information about their customers production. This will lower the cost of knowledge acquisition, creating a competitive advantage for the service supply of a manufacturer on its own products. This helps to nuance the sayings of Anderson and Narus (1995) that asserts that it is difficult for the supplier to accurately identify the value of services created for customers.

In our cases, this advantage was also present for Gelderblom, although they do not manufacture the machine they sell. The fact that they are the official retailer for one brand, and one brand only, allows them to develop a knowledge advantage similar to the one of a manufacturer.

The knowledge advantage was confirmed by Pegard Productics case, as Mr Bolle explained, when working on machines they were not used to, they usually account for a longer time to provide a service because there is a learning process to take into account.

This study adds, to the factors influencing the pricing strategy, the balance of knowledge between a supplier and a customer. A customer hiding information from a supplier might prevent suppliers to discover the true value of their services. On the contrary, a supplier able to hide information from their customers, might in certain situations, be able to capture bigger margin from their services, as Pegard does for the spare parts when they know almost nobody can find. The balance of knowledge will also influence competitors. The cases presented all have a knowledge advantage on the machines they manufacture, used to manufacture or exclusively sell, allowing them to create a cost advantages for the service provision on their own machines compared to competitors.

The advantage a manufacturer has on its competitors regarding service providing does not uniquely lay on knowledge. Complementarily to Oliva and Kallenberg (2003) theory, the manufacturer also has an advantage in the trust a customer has in its capabilities to provide a service offer on its own machines, and sometimes even on machines from other manufacturer (as it is the case for Merco Machines). Whereas Merco Machines and Gelderblom current customer base is convinced in their ability to provide services, the new customers could be persuaded through a demonstration of a machine capabilities thanks to a showroom or a current customer site.

It is another challenge for Pegard Productics to provide proof of their competences in the service offer, especially for services of critical importance. The notion of trust was well highlighted by Mr. Bogaerts when the comparison was made with an auto manufacturer. Although a customer might be ready to cut down on cost for a simple check-up and go to any garage, when an important reparation occurs, it is more probable that he will go to the car manufacturer and be ready to pay a price premium.

The research agrees with Anderson and Narus (1995), standard services are weaker in front of competition. Their standardization makes them highly comparable, and often, their costs are easy to compute. In this situation the customer expects the provider to offer services at competitive prices, making it difficult to extract higher margins. Although, not impossible, as

it seems that some of the customers of Gelderblom goes to other service providers for simple services in order to get better prices, although it concerns only a minority of their customer base.

On the competitive aspect, this research adds that the size of the customer will have an impact on the competition the supplier will face in two ways. First a large size organization is able to create competition thanks to its wider range of purchasing capabilities and will usually try to cut expenses through services. Whereas a small size organization might not have the time to create competition between service suppliers. Second, a small size organization will be more dependent on the machine he has and will generally be readier to pay for services in order to ensure its production. This joins Aitken and Paton (2016), and Ulaga and Reinartz (2011) affirmation that, depending on the person who's responsible for the transaction at the buyer's organization, the willingness to pay might change.

In the same regard, the notion of urgency will impact the ability of the customer to create competitiveness. This is particularly true for critical services such as reparation. A breakdown will have strong impact on production, especially for small suppliers, giving them less time to compare offers and raising their willingness to pay in order to get the production line running again.

The findings were in agreement with Hünenberg and Hüttman (2003) about the risk stemming from offering services. Indeed, providing services will incur a number of risks, such as the possibility that the time to perform a service might change from what was previously estimated. Although by including risks in the cost calculation, or through the revenue model by using input based payment mechanisms, the organizations in our cases are able to mitigate the risks for their organization. Furthermore, the manufacturer has a knowledge advantage over the competition on its own machine which gives him an advantage in the risk he is facing when providing services. This joins Neely (2008) theory as well, that the manufacturer, when developing a service offer will have to be able to manage and control risk in order for services to stay profitable during servitization. Moreover, risk can also appear for the customer from the supplier selection process because they are not aware of suppliers' capabilities to perform services, which are by nature hard to assess (Van Looy, Van Dierdonck, and Gemmel, 1998).

As Anderson and Naurus (1995) did, this research witnesses the priority that the sale staff can give to the sale of products. This is particularly true for product life cycle services (Reinartz and Ulaga, 2011). This study adds that there might be some misconception about what really is a pricing strategy, what are the benefits and to whom do those benefits apply.

7. CONCLUSION

The objective of this research was to have a look at pricing strategies used by machine tool manufacturers and the factors that will impact it. The originality came from the will to take into account the customers' perspectives as it appeared to lack in the current literature. But also from the fact that all the cases analysed had different vertical positions in the product value chain. Thanks to their various position it was possible to highlight the differences between organizations extracting different benefits from services, and the advantages a manufacturer can have on its own machinery regarding service provision. Several factors revealed to impact pricing strategies.

First, this paper confirmed the impact of the role of services. Services providers who use services to support the product sales will tend to keep traditional, cost based, pricing strategies and will not try to extract large margin from services.

Second, competitive position has been confirmed to influence pricing schemes. Suppliers who are in a better competitive position will have more liberty on their pricing strategies. On the contrary, those who are not well positioned competitively are stuck in competitive based pricing. This is the case, excepted if the supply side find ways to create a competitive advantage, or, if the buyer faces time constraints diminishing its ability to compare offers across the market. Equally, the difference in size will impact the competitive position. Indeed, small or middle size service providers facing large buyers, who have developed purchasing department and have more capabilities to create competition across suppliers, will create competition by comparing offers on the market. On the other hand, competitiveness can be reduced though the use of bundles. Bundles will help to lock customer in a service offer and will encourage rebuy and increase of service coverage.

Third, pricing strategies will be impacted by risks in two different ways. By the risks incurred by the customers, and by those incurred by the suppliers. The customer takes risks in the supplier selection which will diminish his willingness to pay for services. The supplier, as well, takes risk in accepting service contracts. That is because of wrong cost estimations that can be done when setting the price of services, and service providers' misjudgement of his abilities to truly perform a service. This risk can be mitigated through pricing strategies by

using revenue models based on hour rates or including risks in the cost computation for example.

Fourth, this research brought novelty by highlighting the impact the relationship between the supplier and the customer has on pricing. This relationship itself is impacted by the balance of knowledge and the relation of trust between the two parties. The balance of knowledge will be influenced by their ability (or willingness) to hide or discover information about each other. In this regard, the manufacturer has an advantage on its own machinery as he knows what is the use of the customer from its machines and thus the value the customer could extract from it. Also, the market in which the supplier operates, as well as the service supplied will impact this ability to hide information. A balance of knowledge at the advantage of the supplier will give him more freedom on pricing strategies.

Fifth, another novelty from this research comes from the notion of trust which will also be impacted by the balance of knowledge. Customer and supplier being open about their business will create a relation of trust between the parties, giving the ability to set different pricing strategies for the supplier. Again, manufacturer has an advantage on this point for its own services. The customer will favourite the manufacturer of the machine for critical services, because of the trust he has in its capabilities in the same way a customer will favourite its car manufacturer for important services.

Sixth, service providers will have difficulties to impose innovative pricing strategies with simple service offers. Indeed, simple services are more distraught in front of competition due to their high comparability.

Seventh, knowledge about pricing strategy has an important role in order for a manufacturer to impose new pricing schemes. Misconceptions about pricing capabilities or a lack of knowledge about pricing alternatives and their advantages will stuck the supplier in traditional methods.

7.1. Managerial recommendations

It might be interesting for organizations to look deeper at what a pricing strategy can bring to an organization. Although it is true that through more innovative pricing strategies you can better capture the value created through the service offer, the benefits do not stop there and

most importantly, according to literature benefits also reach the customer's organization. Value based pricing, for example, can force the service provider to better adapt its services in function of the customer (Ng, Maull, and, Yip, 2009), reduce moral hazard, harmonize suppliers and buyers' incentives, and, reduce customers total cost of ownership (Hünerberg and Hüttman, 2003).

Moreover, supplier should progressively start to realize that services can go further than product support. Once again, this could be at the benefit of both the supplier and the customer. By seeing the service offer as an end in itself, the supplier can start to develop more advanced services such as process delegation services. This will allow him to deepen its relationship with its customers by better answering its needs. The supplier will then be able to lock the customer in its offer and capture higher margins. The customer on the other hand will see its productivity increase and will have a machine with longer life cycle. This will allow the supplier to have more freedom on pricing its services as the customer readiness to pay will increase thanks to the value services create for him.

7.2. Limitations and future research

This research has its own limitations which are presented below.

The research was only done on a small set of firms as three cases were analysed. Also, the group analysed is rather homogeneous. Regarding the pricing strategy and service offer, although certain variations are observed, all the organizations are using cost based pricing strategies, standard bundling, and are at their early stage of the servitization process. Furthermore, the set analysed mainly focuses on product life cycle services. This prevented the ability to witness in what characteristics an organization, who has made the step toward output based pricing, is different from the others.

Another limitation is linked to the fact that this study was done on manufacturers coming exclusively from Belgium and exclusively linked to the machine tool industry. Analysing organizations from different countries and sectors might provide different results. Especially as the pricing strategy is partly linked to the country, sector specifics practices (Malleret, 2006) and to country specific regulations (Rapaccini, 2015).

Furthermore, the three cases are small to medium sized organizations that deal directly with other business organizations. This study, thus, do not treat about pricing strategies and the factors influencing it in regard of the consumer market.

Because of the reasons previously cited, the generalisability and transferability to other sectors and geographical locations of the conclusions advanced in this paper are both uncertain.

For further researches, it would then be interesting to aim at organization more advanced in their servitization process and that have set up innovative pricing strategies. It would also be interesting, to address other sectors and organization of various sizes and various markets. Furthermore, literature could benefit from investigation on how the digitalization of the machines and the ability to use online monitoring on machines could impact the price setting in a B2B environment such as those examined during this thesis.

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9. APPENDICES

➤ Appendix 1: Pre-selection questionnaire

Thesis: Pricing strategy of manufacturing organizations offering services

Please note that all information will be kept confidential and will only be used in the framework of this research.

What is the name of your organization? *

Short answer text

.....

What is your position inside your organization *

Short answer text

.....

Product and service proposition

Description (optional)

What is your best-selling machine or piece of production equipment (please provide the name and some short specifications or a link to a website page where more information is available)? *

Short answer text

.....

In relation to this machine/production equipment, what kind of services does ^{*} your company offer?

- ☐ Initiation services (Installation, on-site adjustment and fine-tuning: getting the machine up and running)
- ☐ Financial services (for instance in the form of spread payment or leasing or renting schemes)
- ☐ Advisory/Training (Training, Helpdesk, Data Analysis-based advices, Advice towards Efficiency Optimization)
- ☐ Maintenance/Repair (Reactive/Preventive Maintenance, Repair/Retrofitting, Spare Parts)
- ☐ (Re-)Construct/Design ((Re-)Development Services, (Re-) Design Services)

If you wish to mention a different set of services your company provides, or would like to specify certain services, please feel free to do so in the box bellow

Long answer text

Does your organization propose combinations of products and services to ^{*} clients (as a "product-service system") or does it propose products and services separately?

- ☐ We offer products and services in combination
- ☐ We offer products and service separately
- ☐ We do both: offer them as a bundle and separately

Role of services within your organization

Description (optional)

What department is responsible for the determination of the price of services? *

- ☐ Service organization is integrated as a cost center in the business unit for products
- ☐ Separate business unit for services with own profit-and-loss responsibility
- ☐ Services are developed under the customer relationship department
- ☐ Services are developed under a quality care department
- ☐ Other...

Price setting

Description (optional)

To who does your organization offer services?

- ☐ Only to clients that make use of machines that we have manufactured
- ☐ To all kind of potential users; even those who do not make use of the machines we manufacture

Towards those clients that make use of machines you manufacture does your organization charge for services? *

- ☐ We don't charge for services
- ☐ Separately: if a client commands services, we present a corresponding price to the client for the services in question
- ☐ Jointly: we offer a package deal or an all-in price that covers both the machine(s) they buy from us and the services to
- ☐ Other...

If your organization charges for services, how do you determine the prices for services: *

- ☐ Price is determined by comparing what the competitors are doing
- ☐ Price is determined by computing the costs incurred for your organization
- ☐ Price is determined through the value or the output that the supplied service generates for the customer (pay in function of the value)
- ☐ Other...

Which percentage of your company's turnover stems from revenues due to service provisioning? *

- ☐ 0-10%
- ☐ 10-20%
- ☐ 20-30%
- ☐ 30-40%
- ☐ 40-50%
- ☐ 50-60%
- ☐ 60-70%
- ☐ 70-80%
- ☐ 80-90%
- ☐ 90-100%

Of the companies that bought a machine from your company, which percentage is also paying for services from you?

- ☐ 0-10%
- ☐ 10-20%
- ☐ 20-30%
- ☐ 30-40%
- ☐ 40-50%
- ☐ 50-60%
- ☐ 60-70%
- ☐ 70-80%
- ☐ 80-90%
- ☐ 90-100%

Would you be willing to take part in an interview regarding this topic? *

- ☐ Yes
- ☐ No
- ☐ Maybe

How can I contact you for further research?

Short answer text

➤ Appendix 2: First round of interviews guideline

- Presentation of the Organization
- Presentation of the interviewee
- Presentation of the service offer
 - How is the service offer developed?
 - Are services pushed forward?
- Pricing strategy
 - Competition based
 - Effectiveness of investment based
- Bundling. Why? Different pricing strategies? Standardized bundles?
- How are the services paid for? (fix cost? Time rates? Pay per use?)
- Did you consider implementing new pricing strategies?
- Risk and pricing strategy

➤ Appendix 3: Second round of interviews guideline

- how big is the supplier (firm you interviewed) and the average customer they serve?
 - the supplier is substantially bigger than the average customer (substantial means at least double in turnover or employees)
 - ... is marginally bigger (less than double)
 - same size
 - average customer is substantially bigger
 - ... is marginally bigger
- Buyer or Seller Market
 - we are the monopolist in our field; there is no-one else that offers what we do so customers are obliged to come to

- we operate in a market of "perfect" competition; we are just one of the multitude of suppliers that offer very comparable value propositions; the clients can freely choose whom they choose

- Nr of buyers
 - there is a huge amount of potential clients for our kind of services (there is more than enough for everyone/supplier like us)
 - there is a fair amount of buyers for our services (we need to make a difference, otherwise they go to the competition)
 - there is a small amount of buyers for our services (we're in a cut throat competition situation -> often implies competing chiefly on cost)

- Proportions of buyers and sellers
 - large nr of buyers - large nr of sellers
 - large – small
 - small – large
 - small- small

- Relational focus
 - Maintaining a relationship with them is more important to us than individual outcomes
 - We will maintain the relationship with them only if each transaction produces a positive outcome (1)
 - Payoffs from individual transactions are more important to us than maintaining the relationship with them (1)
 - Our relationship with them is important only because it facilitates individual transactions (1)

- Do you think there are risks involved by offering services?
- How confident are your customers in your products/services capabilities? How much convincing do you have to do?
- Do you know if your customers procure services elsewhere? Why is that?
- For Gelderblom: Why is the price of services incorporated in the machine price?
- Do you use your knowledge in customers business (what they earn from their machines for example) to price your services? How much information do you generally have about your customers and how do you use it?
- On the contrary, how transparent are you about your pricing strategy? Why?

➤ Appendix 4: Open coding cross case analysis

	Theory	Merco Machines	Gelderblom	Pegard
Type	//	Machine Manufacturer	Reseller	Service Provider
Size	//	55 people (19 engineers)	30 people (16 technicians)	20 people (two poles mechanics and machining)
Turnover 2016	//	13M	??	3M
Product offer	//	All the machines needed to manufacture and recondition a steel drum	turn mill machines, multi-tasking, lathes, grinder	//
Customers	//	All around the world (65% in Europe) (Avoid selling to China)	Benelux	Mainly Belgium, but also abroad around the world
Values	//	Long Term Relationships, quality & cooperation	Open possibilities: Whatever the customer need we can make it	They'll always try they best to solve customers' problem in shortest time they can
Competitive Position		- Median customer is marginally bigger than Merco - It's a niche market where they are the leaders -around 50 Potential customers around the world and 4 competitors (excluding China) - They want to maximize profit on the long term	- Big range of customers from very small to very large -Average customer is slightly bigger than Gelderblom - around 700 potential customers, and numerous manufacturer providing choice to customers - hard competition	-Customers are usually bigger than Pegard
Interviewee	//	Mr. Jeroen Bracquez: Sales Manager	Mr. Wim Bogaerts: Sales and Services manager	Mr. Gauthier Bolle: Operational Director

Service offer	- Product Life Cycle Services (PLS) - Asset Efficiency Services (AES) - Process Support Services (PSS) - Process Delegation Services (PDS)	Mainly PLS: Refurbishing, installation, testing, spare parts, remote monitoring and AES: commissioning and post commissioning	Mainly PLS: Installation, testing, spare parts, documentation, retrofitting, spare parts, hotline and AES: pre-reception-test, training, automatization	PLS only: Spare parts purchasing, spare parts manufacturing, reparation, urgent interventions, maintenance, retrofitting, calibration
Role of services		Pre-sales services are done for free: sales enabler After sales service not for free: LT relationship enabler, satisfy customer's needs	Answer new tendency on market, customer need an entire solution. Keep customer satisfied, "If you don't have good service peoples you don't sell many machines."	Main Business Long maintenance contracts to avoid gaps of activity along the year
Risks of offering services	//	Risk comes from the incertitude of the time an intervention can take, risk is mitigated with an hourly rate revenue model	Risk if problem occurs during reparation, risk is not incorporated in the pricing strategy	They open machines models they are not familiar with and might not be able to solve the problem, every manufacturer has their own little secrets
Pricing Strategy	- Competition Based - Input/Cost Based - Output (Effectiveness of Investment) - Output (Customers Economic Results)	Cost based: Want to stay very transparent with customers. "Fair play with customers, goal is to maximize Organization profit but on the LT"	Cost based: "Our business is not to gain our lives with services" "Some organizations sell at rock bottom price and take margin on services, not us"	Price fixed once a year: Cost based for urgent interventions (customer high readiness to pay) Competition based for the rest
Bundling	- Standard Bundle Vs Customized Bundle - Different pricing?	Commissioning and post commissioning always bundled, rest is choice of customer Bundling to make sure the machine will work properly	Installation and training obligatory Bundling to make sure the machine will work properly	Tries to push bundle of services more and more (kind of new for Pegard) Goal: Spread more evenly activity along the year

Revenue Model	- Fixed Costs - Time Rate Fees - Pay Per Use	Time rate fees and material fees Pretty much transparent approach	Prices of installation and training are incorporated in the price of the machine Otherwise price can be based on hourly rates or on intervention	For urgent service: cost based (hourly rates) it's a way to incorporate the risks For the rest risk is integrated in the yearly hourly rate computation For spare parts; cost based For maintenance, reparation, calibration: intervention based Not transparent except for unusually big contracts
Pricing Capabilities	- Organization Changes - Staff Consideration of Services - Who's Responsible for Service offer and Pricing	Services are in sales department except spare parts which is its own department Spare parts are supported by their own machine park Thanks to their worldwide network of customer they can organize visit of current customer to possibly new customers to check it out	Services are in the sales department. They have a showroom/training/testing facility in Germany	Services are in the Operation department which also takes production, sales and strategy functions Machine park with large range of machines where they can make any type of parts (up to 5mØ)
Customer Service Procurement and Service Pricing Strategy	- Experience/Credence quality - PLS seen as an imperative by customers - Simple services weaker in front of competition	Customers have very low margins, forcing to Merco to sell equipment with very competitive TCO. Customer negotiating is engineer, able to estimate real value of service or product	Big organization usually low willingness to pay for services, less the case for small organizations. For simple services such as maintenance, customers might do it themselves or go to service providers to get better price	Big organization usually low willingness to pay for services, less the case for small organizations

Balance of Knowledge	//	Tries to be very transparent with customers, it is a way to create trust which is very important for LT relationships. Also, because it is a niche market it is hard to hide information, customers know each other's, and news goes fast.	Gelderblom tries to be transparent with their customers and so does most of their customer	It's rare to know what the customer earns from production or what he is even manufacturing. Good indicator is the pressure received from customer It's hard for the customer to know if we really can do what we say we can do
Customer confidence	//	Customers seems very trustful of Merco machine capabilities (they have customers around the world so potential new customers can go and look)	Gelderblom has a showroom where they can demonstrate their capabilities	- Pegard sometimes must convince its customer - "Pegard could take risk to gain a contract"

