

Adaptation Gary Hamel's business model theory to be implemented in small companies of the metal mechanic sector in the city of Cali, Colombia

Adaptación de la teoría del modelo de negocios de Gary Hamel para ser implementada en pequeñas compañías del sector metalmeccánico en la ciudad de Cali, Colombia

Adaptação da teoria de modelo de negocios de Gary Hamel para ser implementada em pequenas companhias do setor metalomecanico na cidade de Cali, Colombia

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Abstract

This paper is a proposal for an adaptation of Gary Hamel business model theory, applied to small metal-mechanic sector companies, in order to improve their competitiveness in an environment where competing companies in the Colombian market are those with whose countries have signed FTAs, countries located in the top ten

rankings of competitiveness. This implies that these small businesses must be prepared to compete with strong innovation. The proposal includes a step-by-step that small metal-mechanic companies must implement to be more creative, innovative and competitive; a link between the Gary Hamel business model and Norton and Kaplan strategic maps with a Balanced Scorecard, with examples based on qualitative researches to companies in the sector. Although the proposal includes a template designed in Excel, this article aims to explain to the business owner how it is possible to improve its competitiveness in a practical way and applied to the business.

Keywords: Business model, metal-mechanic sector, competitiveness, innovation, Balanced Scorecard (BSC).

Resumen

Este artículo es una propuesta para una adaptación de la teoría del modelo de negocios de Gary Hamel, aplicado a las pequeñas compañías del sector metalmeccánico, con el fin de mejorar su competitividad en un ambiente donde las compañías que vienen a competir en el mercado colombiano son aquellas con cuyos países se han firmado TLC, países ubicados en los diez primeros puestos del ranking de competitividad. Esto implica que estas pequeñas empresas se deben preparar para competir con fuerte innovación. La propuesta incluye un paso a paso que las pequeñas empresas metalmeccánicas deberán implementar para ser más creativas, innovadoras y competitivas; se incluye un enlace entre el modelo de negocios de Gary Hamel y los mapas estratégicos de Norton y Kaplan con un Balanced Score Card, con ejemplos basados en investigaciones cualitativas a las empresas del sector. Aunque la propuesta incluye una plantilla diseñada en Excel, este artículo pretende explicarle al empresario cómo puede mejorar su competitividad de una manera práctica y aplicada a su empresa.

Palabras clave: Modelo de negocios, sector metalmeccánico, competitividad, innovación, Balanced Score Card.

Resume

Esse artigo é uma proposta para a adaptação da teoria do modelo de negócios de Gary Hamel, aplicado às pequenas companhias do setor metalomeccânico com o fim de melhorar sua competitividade num ambiente onde as companhias que vêm a competir no mercado colombiano são aquelas com cujos países se tem firmado TLC, países localizador nos dez primeiros lugares do ranking de competitividade. Isso implica que essas pequenas empresas devem se preparar para

competir com forte inovação. A proposta inclui um passo a passo que as pequenas metalomecânicas deverão implementar para ser mais criativas, inovadoras em competitivas; se inclui uma conexão entre o modelo de negócios de Gary Hamel e os mapas estratégicos de Norton e Kaplan com um Balanced Score Card, com exemplos baseados em pesquisas qualitativas às empresas do setor. Mesmo que a proposta incluir uma tabela desenhada em excel, este artigo pretende te explicar ao empresário como pode melhorar sua competitividade de uma maneira prática e aplicada a sua empresa.

Palavras chaves: Modelo de negócios, setor metalomecânico, competitividade, inovação, Balanced Score Card.

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Introduction

In Colombia, SMEs¹ represent approximately between 90% and 96% of companies that exist in the country and the same percentage applies to the city of Cali according to the local Chamber of Commerce for 2009. These SMEs are micro enterprises that have grown through time as the industrial growth of companies of sugar production, graphic arts, food, laboratories, among others, that settled in the city of Cali in the 70's and 80's. This growth has been disorganized, as most of these businesses generated suppliers, distributors and service companies, which helped to develop a small business elite that allowed the opening of many other companies that under the thought of satisfying needs of these industries, were consolidated as metal mechanic.

All this happened because in the 70s and 80s, there were very few people who had experience or had college degree. Therefore,

the chance of accessing information systems or the necessary knowledge to allow micro entrepreneurs to take decisions based on financial statements, was minimum, in terms of their capacity of production or the needs of their customers. That was the main reason of the technological advances that the metal mechanic industry had were the result of economic circumstances rather than the purpose of orienting an economic policy.²

The city of Cali became during the 90s and 2000, an epicenter of education, where universities were developed gradually achieving recognition for the skills of their graduates. However, only few of the successors or heirs of SMEs in the metal mechanic sector were trained and contributed to develop their family businesses. This led to many operative workers who were unable to find business opportunities for retirement and to invest their capital in machinery, to end up working as service providers.

1. SMEs: According to Article 2 of Law 905 of 2004, a Small and Medium Enterprise is a unit of economic exploitation by individual or corporation, in business, agricultural, industrial, commercial or services, rural or urban.
2. An individual enterprise is one in which a person or entity meets the qualifications required to carry on trade and spent part of his property to do commercial activities, getting the benefit of once legal formalities met rigor.

Micro enterprises began to multiply in the city as individual ones (created by Act 222 of 1995) due to the fragmentation phenomenon and not to the opportunities of satisfying the needs of larger companies.

Based on this background and qualitative research results as presented below, it was proposed to adapt Gary's Hamel business model to the metal mechanic sector companies in order for the small firms in this sector to grow orderly, systematically and programmatically to prepare for the challenge of facing the threats brought by free trade agreements that Colombia has signed or currently expects to sign.

Research results

In order to make a better analysis of this sector it will be necessary to categorize the following topics obtained in qualitative research that was conducted on local companies:

- Employment, added value and the use of technology.
- Competition
- Strengths and weaknesses of the companies and the relationships with their customers.
- Innovation and development

Employment, added value and the use of technology: The metal mechanic and steel industries generate almost 10% of industrial employment in the region (DNP,³ 2004).

According to DANE,⁴ the metal mechanic industry in the local market accounted about 4.3% of added value in manufacturing in

Cali for 2003. Its products generated a rapid return on capital invested without involving large value towards innovations in pro of the aggregate value.

Within the technological resources, the metal mechanic production chain has advanced technologies, machinery and equipment related to computer numerical control (CNC), core technologies of microelectronics and new work structures related with the "soft technologies" meant to change the structure, attitudes and abilities of existing social groups inside the companies.

Despite the existence of associations representing the interests of the players in the chain, and that employers are ascribed to them, there are no strong incentives to exploit these linkages and partnerships that end up being a subordinate strategy. On the other hand, only a few companies make strategies with other competitors or their input suppliers. Therefore, the supply chain must work in a joint enterprise to enable to flatten the production process and increase the competitiveness of the chain using all the potential that creates a broad platform of MSMEs,⁵ since they would make the best use of the insertion in activities neglected by large companies.

Competition: The companies of the metal mechanic industry have many competitors and that is the reason resulting in many industry workers have decided to "set up elsewhere", making an investment that leads to constantly creating micro or individual enterprise with the same technology for small businesses. However, this is a threat since many of these technologies affect the quality of business.

3. Departamento Nacional de Planeación (National Planning Department).

4. Departamento Administrativo Nacional de Estadística (National Administrative Department of Statistics).

5. Micro Small and Medium enterprise.

The engineering sector is a very homogenous market, which can make difficult to distinguish between large and small businesses. But small enterprises have skills that large companies fail to take due to the low rigidity of its organizational structure, as these have more pressure of the market because of the multiple occupations with more robust management systems.

There are many one-person companies built in a garage and these do not plan their actions. In some companies consulted in the commercial area, they are only interested in sales, but there is no evidence of marketing activities directed to seduce their existing customers.

The current level of competence of the companies on this industry makes their capacity limited, due to that they have enough machinery to produce, but lack on the tools. They acquire what the market allows, but there is not enough human resource to take advantage of everything.

Strengths and weaknesses of the business and its customer relations

- Companies are highly dependent on the decisions of their customers, and this can be seen easily in the sugar industry, where the refiners use mostly corrective actions instead of preventive ones and that influences significantly in the way metal mechanic companies work. Metal mechanic companies do not have a star product in the commercial sphere, as they are all the time depending on the urgency of their customers. [3]

- Metal mechanic companies have engaged in repairing machinery of large and multinational companies located in Cali and its area of influence. The president of ASMETALES⁶ [3] says that once "Carton de Colombia" stated that it would no longer use the services of metal mechanic companies because their factories and machines were obsolete; so they took the decision to import everything new and thus improve efficiencies.
- The knowledge that the companies of this industry have acquired is not enough, because the same task is executed repeatedly. There are no budgets for research and development and therefore there is no much innovation.
- Apparently the Bogota market works better the auto parts, because they have developed reverse engineering and products for the industry, some of them even sell for Latin America. [3]
- Assuming on the safe side their target customers (paper businesses, print shops, food industry, etc.) they will not cover markets outside the region.

Despite all this, isolated cases can be documented, as the company "Fundiciones Universo", develops products for the sugar industry that have penetrated international markets, particularly in Latin America, where the industry is at the same level of Colombia, as president of ASMETALES stated [3].

In general, it can be perceived from administrative practices of companies in the metal mechanic sector that their managers have not had a strategic vision to focus on markets and they are more oriented on produc-

6. Asociación metalúrgica y metalmecánica del Valle del Cauca (Metallurgy and Metal mechanic Association from Valle del Cauca).

tion and supplying the immediate needs of the local customer.

Customers today are generally satisfied with what companies are offering, but do not have a full satisfaction according to the consensus of the interviewed companies.

In the industry there is seasonality, sometimes there is abundant work and at other times there is very little, which entails that large companies will take away business from small companies in times of scarcity.

Usually the customer does not know the technical and technological capacity of companies in the sector and base their decision on prices. Some small businesses still have their advertising informing their CNC technology (Computer Numerical Control, or Continuous Numerical Control), but this is no longer a competitive advantage, as most companies in this sector have it already.

Operators should take full advantage of the machines, so the efficiency tends to be low as it takes a long process, but it meets the specifications requested by customers.

Most of these companies use information and communication systems like the Internet, but this is due to market trends and not to anticipate competition.

There's no initiative to innovate, those who do is because they have done research. The budgets for product innovation do not exist in the companies surveyed.

There's no a selection process for suppliers, these exists by tradition, usually there's a documented purchase model. The administrative area complies with the government norms and its regulations.

ASMETALES [3] is considered a small business association and its role is the commercial activity. It looks for different customers

in different regions. It has worked on the east coast, Bogota, among other places, trying to get new deals, integrating the production capacity and product development. ASMETALES is directing their efforts to the social field, providing training to operators of the sector companies, and it is concerned with the integration of the companies to improve the working dynamics of the association. It is also responsible for seeking to approach social clubs and is careful about getting involved in politics.

All companies have relationships with the formal financial sector and do not take advantage of the support programs for SMEs that the state provides.

Sometimes ASMETALES has managed to unite some companies to gain bargaining power and buy cheaper inputs. For example: metals and industrial gases.

The biggest weaknesses observed are marketing and planning. Given that the efforts are being done in sales, but not on marketing, as well as the lack of good planning. Other weaknesses identified are:

- Innovation and development are very limited. In addition, there is no approach between the university and the small company; the student does not show much interest in working in an SME, or feel motivated.
- The competitiveness in human resources, due to disinterest in studying this subject.
- The generational replacement level of the business person. Because in many cases there is no successor defined or an action plan for the continuity of the office staff that has the profile and skills needed.

The experience is one of the greatest strengths, and the know-how. Local business

people care about doing things right, with quality, are meticulous, but not methodical.

Innovation and development

The knowledge acquired by the companies is not enough, because the same task is executed repeatedly. There are no research or development budgets, and therefore there is little innovation.

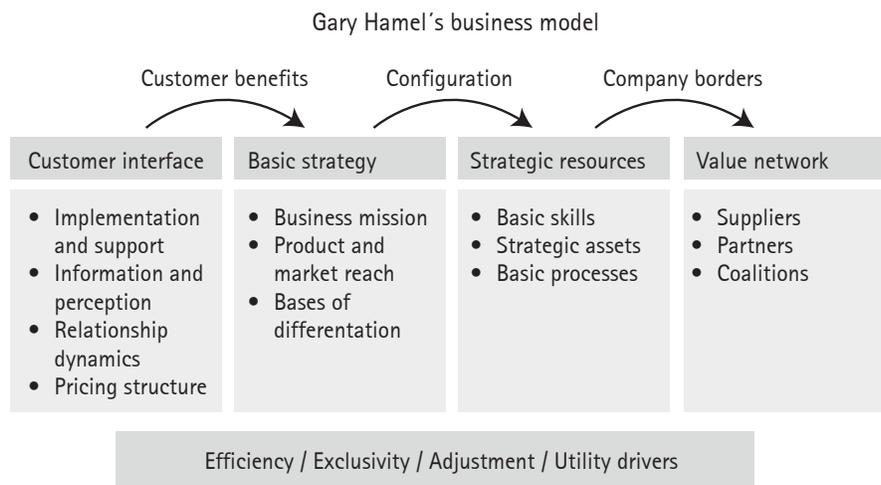
The engineering sector is threatened by the possibility of being absorbed by the external market, specifically, a strong market like the Brazilian or even American and NAFTA. Another threat is economic fluctuations; the recession is palpable. Employers consider they "must endure it, because better times are bound to come." [4]

Currently, the proliferation of companies that are starting in different economic sectors, increase competition generating a reduction in demand leading to the creation of operating systems that become more efficient, and the leverage of existing resources. To achieve this, it is essential not only to respond effectively to projects that are asked,

but also be proactive with customer needs, and specialize in a portfolio.

Today, the service sector is having a relatively high growth globally [5] and although at national level, however, the services sector continues to have the same organizational problems that SMEs have in Colombia, where in 1998, according to the study by the Inter-American Development Bank and the Business Development Centre [6] found that the main weakness with Colombian SMEs is the planning and the lack of resources to develop those plans. Therefore, the creation of a model or management system that helps the competitiveness and productivity of this type of start-ups in this topic is clearly needed.

Added to this, the premature and disorganized growth of companies in this sector [2] motivates this project to offer a business model that allows them to strengthen their organization and if necessary, renew their vision as a company. In the case the companies wish to propose, after the selection of a theoretical business model, a development of a management system; which can be implemented by the staff of the same company or



Source: Gary Hamel, "Leading the revolution"

by a group of professionals having experience in different areas of knowledge (which in turn may give support to SMEs in the service sector who need to improve their processes).

In order for the employer to take the adaptation of the business model, it has been proposed for the development of a tool in Excel that will allow the employer to follow its development step by step, but it is considered key to link all concepts creating a strategy map and a Balanced Scorecard following Norton and Kaplan's theory [7] on this subject.

According to the authors Norton and Kaplan, the company's strategy map is the link that binds its fundamental strategy (vision, mission and objectives) with the results. It is a diagram describing how an organization creates value by connecting strategic objectives with explicit cause / effect relationships, and is used to integrate the four perspectives of a balanced scorecard: financial perspective, customer perspective, internal perspective and learning and growth perspective. The map clarifies the outlook for the core strategy and the results to be consistent.

The authors point out the five basic principles:

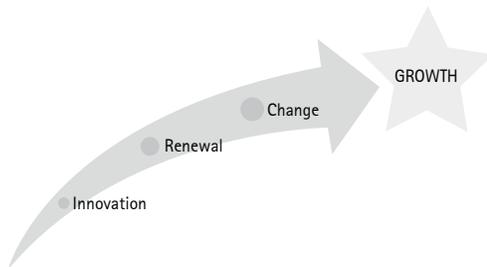
- The strategy balances conflicting forces, such as tensions between the long and short term.
 - The strategy is based on differentiated value proposition for customers, when a clear articulation is required from the customer segments and the value proposition required to satisfy them.
 - The value is created through internal business processes, when the internal perspective and financial strategy maps describe the results, which is, what the organization hopes to accomplish.
 - The strategy that consists on simultaneous and complementary themes. The improvement of the different processes in terms of compliance with planned arrangements and quality indicators associated with them is necessary. For example: operational process (supply, production, distribution, risk management), customer relations (selection, acquisition, retention, growth) innovation (design, development, launch), regulatory and social (environment, safety and health , employment and community).
- According to Kaplan and Norton [7], there are seven characteristics of strategy maps:
- All information is contained on a single page to facilitate strategic communication.
 - Four perspectives are presented: financial perspective, customer perspective, internal perspective and learning and growth perspective.
 - The financial perspective is focused on creating long-term value for shareholders and uses productivity strategy to improve the cost structure, and asset utilization and a growth strategy to expand opportunities and promote customer value.
 - These last four elements of strategic improvement are supported by price, quality, availability, selection, functionality, service, partnerships and branding.
 - An internal perspective of business processes and customer management helps create the attributes of products, services, innovation, regulation and social processes cooperate in relationships and image.

- All processes are supported by the allocation of human, organizational and informational capital.
- The organizational capital includes the company's culture, leadership, alignment and teamwork.
- The arrows connecting describe relationships of cause / effect.

Business model adaptation for small company services of the metal mechanic sector

Instead of proposing the implementation of a methodology, it is an invitation to the employer to innovate from their own business, offering something that makes them be preferred by customers instead of their competition.

Changes expected with the implementation of the model



Source: Based on Gary Hamel's business model

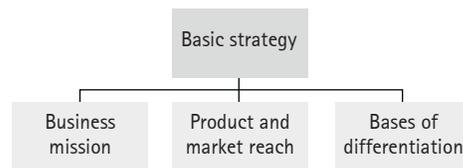
As explained by Professor Bermeo [11] in his report on the results applied to SMEs, small and medium metal mechanic enterprises have special business structure qualities, because the work comes facing the client request; with high type of product variety, small quantities demanded, emerging levels of documentation and information provided by customers, with low order frequencies. It also presents a framed corporate behavior in

the emerging handling of inventory control, high flexibility requirements, lack of planning, production control and, in some cases, lack of compliance with technical specifications, dimensions, the surface final details, material, additional treatments and tolerances.

Returning to the methodology presented above, it begins to approach the basic strategy, which aligns the efforts towards a clearly defined goal as outlined in the following chart.

Basic strategy

Graphing basic strategy



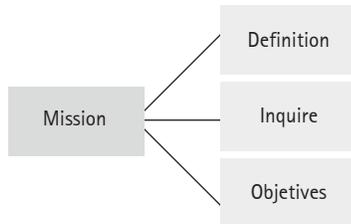
Source: Own based in Gary Hamel's business model

Company Mission: due to the same characteristics of the industry, it is very common for companies of the sector not having an established mission. But this is a neuralgic point to determine the capacity of the company and the level of progress over time; this is clearly shown in the graphic representation of the mission, which is outlined below. The mission should be structured according to the market that the company will reach, and the competition that has developed around this specific need.

For Gary Hamel [29], the mission includes the general objectives of the strategy, which is expected to reach the model. It covers points such as value proposition and the general strategic intent. It implies a sense of

direction and a set of criteria, to the light of which progress can be measured.

Graphical representation of the mission



Source: Own based in Gary Hamel's business model

Arthur A. Thompson Jr [9] states that the mission describes the current activity and commercial purpose and answers: "Who?" "what?" and "why?".

For Darrell Rigby and Barbara Bilodeau [8], a mission statement determines the company's business, its objectives and its approach. A vision statement describes the desired future situation of the company. Elements of the mission and vision are often combined to provide a statement of purpose of the company, goals and values. However, sometimes the two terms are used interchangeably.

Applied to a metal mechanic company, it is about what it aims to be positioned and how it is expecting to accomplish it; these are the guidelines that will allow evaluating the progress of the company.

If a mission has already been defined, it would be wise to check its validity, that is to say, how is the company according to the needs of their customers today. For example, if the main products manufactured are high precision parts, such as spares, within the mission is to look for products that meet the strictest specifications.

The company has to formulate itself a series of questions such as: "What is our business mission? What we want to be as a com-

pany? Is it possible to determine a starting point and a destination point? What are our ideals? What is the decisive influence we want to exercise on the market?" [29]

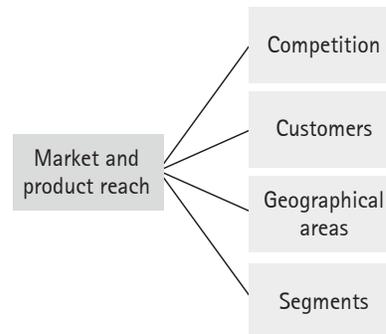
In this sector, customers are searching for the manufacturing of many and varied parts, with high accuracy measurement. According to this need it becomes imperative to have the technology and knowledge to lead the organization to provide customer satisfaction by offering what the customer needs.

At this point it is appropriate to reconsider defining the company's objectives, which to leads to evaluate how these are aligned with the business model that wants to be developed.

Product and the market scope

At this point, the following must be determined: the competition, customers, geographic areas and segments as illustrated in the following graphic. When the company accomplishes to vary and reaches a type of customer that is not within the parameters of competition, it might obtain an innovation tool.

Graphical representation of the product and market scope



Source: Own based on Gary Hamel's business model

Competition: As explained in the market study, competition in the metal mechanic sector is strong, although there are few small businesses that compete with similar technologies, organizational structures and technical infrastructure and technology. There are many micro-enterprises and sole proprietors with rudimentary plants, trying to gain market share and sometimes by its organizational structure they are able to compete with SMEs, as this sector is characterized by a strong inclination to lower prices.

Customers: These can cover a wide range depending on the focus of the company, for example if the design and manufacture of molds are being offered, potential customers could range from enterprises to independent people who need a special piece. But if what is sought is to offer high precision pieces for machine parts, potential customers are among mills and refineries.

Geographic areas: metal mechanic companies offer their services in the area of influence of the city of Cali, and there are many companies in free trade zones and special areas in neighboring municipalities. Very few companies have national influence, and with few exceptions some export with great success, but in very small quantities and with minimal participation in its total sales.

Segments: Currently metal mechanic companies segment their customers by business activity, as food companies and printing companies, by firm size, as large or multinational companies, but they need to be able to identify other ways to group their customers. For example, customers with four-color offset printing, so they could work on the development of a part or assembly of parts, encode internally and create a portfolio of products for this segment, so that these parts can be manufactured in series and reduce produc-

tion costs, and enable vendors to offer their products to the printing industry.

One might then ask the question whether it is possible to offer customers something that would be closer to a total solution for their needs by expanding the definition of the product scope. The set point will be able to increase the participation of the company in the customer's expenditure as well as the markets by expanding the scope product. A different definition of the field could allow to capture more of the profits associated with the life cycle of the product or service. The company must question whether there are categories of customers that other companies in the same industry have neglected [29].

For example, in this particular sector, many work requests that are proposed for the same customers remain on stand-by, that is to say, according to the need or "urgency" for a piece to be manufactured. The focus of the company should discern if it is worth working with the maintenance departments of companies to create engineering projects that will maintain a stock of the most requested tasks by customers.

Differentiation bases

Returning to Gary Hamel's concept [29], the differentiation bases capture the essence of how the company competes, and in particular, how it does it in a different way than their competitors. For this case, it is retrofitting to determine what can lead to differentiate the company from the competition. At this point one may think that they are very limited due to the position in which the company is, because if it is already in its maturity stage, one might think that what could be done has been done. However, the idea is not limited and explores new concepts that

expand the business, and if necessary, for the company to reinvent itself. This entails the company to "rethink" and then answer following questions:

- How do the competitors differentiate from themselves in this industry?
- Are there other dimensions (possibilities) that could be explored?
- In which aspects of the product or service has differentiation been less?
- How can the differences in some dimensions explored be increased?
- Has the researched differentiation opportunities in all aspects of the business model been done carefully?
- What makes companies prefer to work with this particular company, besides just the price? Could the availability be considered for every day of the week?

Certainly by the same operation of factory maintenance during weekends, emergencies arise that must be dealt with immediately. If the company has the availability to give the solution to this need, customers will chose this company over another.

For example, according A. Thompson [9], a way to gain a competitive advantage is to expand outside its domestic market whether through a different location to reduce costs in a competitive transfer of skills and abilities of their domestic markets to foreigners, or through the performance of international coordination; which is not available to the purely domestic competitor.

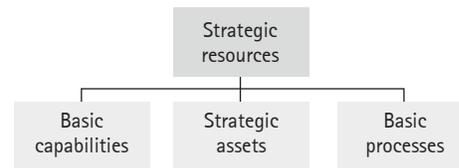
It would therefore be desirable to seek other markets, or specialize in products of interest to several areas of the country, or to manufacture parts for the sugar industry in order to seek to provide services in areas of Central

and South America that participate in the industry.

Strategic resources

To Gary Hamel [29], "All competitive advantage worthy of the name, rests only on specific resources" and the change of approach in the management of these can generate a competitive advantage that sets them apart from their competitors.

Graphical representation of strategic resources



Source: Own based in Gary Hamel's business model

Basic skills

The basic skills are the abilities and aptitudes that a company [9]. Taking this definition to the segment chosen according to the characteristics of enterprises already expressed by the interviewees, one could say that they are all in similar conditions. They have developed skills and abilities, but it is necessary to evaluate and determine which of these are unique or which can lead to becoming a key feature.

For example, a weakness is the lack of trained personnel in these branches, making it difficult to find employees that can be linked to the craft. An alternative to solving this problem is to identify those employees who have outstanding skills, whether acquired through the academy or the experience, and look for the transmission of knowledge through internal training and accompaniments of the most inexperienced employees during daily

routines; complementing this with a documentation to save information for new employees, ensuring a constant knowledge transfer, which is not interrupted by the staff retreat. At this point, the company should evaluate which are their basic skills, explore new opportunities for clients, promote the benefits of their basic skills to enable them to provide customers with knowledge and to present these benefits.

The evaluation of the impact of its capabilities must be conducted if introduced in industries where competitors have very different skills and new capabilities to be added the company's market concept [10].

A. Thompson [9] defines a core competition as an important activity that a company performs better than other internal activities, so this is where the business should analyze what basic capability can be turned into a competition.

Strategic assets

"These are assets that a company owns. Mostly technical aspects. May include trademarks, patents, infrastructure, property rights, customer data, and anything else that is both scarce and valuable "[29].

It is essential to evaluate what strategic assets are owned by the company, the new forms that carry new customer value, evaluating whether these assets could bring value to other industries, as well as alternative uses [29].

In the engineering sector, at some point, the CNC machines have come to represent a strategic asset, but currently, it is a minimum requirement that is even sometimes not exploited because of lack of trained staff or even a correct planning. These machines are only used for processes that si-

milarly could be made on conventional machinery without generating any additional value or costs.

Before thinking that the company does not have the resources for a renewal of assets, it is preferable that the company reevaluate the ones already owned and their ability to operate today. The goal should be to find where it can make the use of the whole plant, looking for projects that require a deeper analysis of machining paths to follow, the type of tool to be used and the use of different types of refrigerants.

Basic processes

These are the daily routines, processes that take place every day. But a detailed and focused analysis on each of these can lead to identify activities that can be done differently, perhaps achieving reduction of time, reducing material waste, improving project planning, among others.

For example, brainstorming among employees of a specific area can be a good tool to start for solving a problem that occurs and that so far it hasn't been solved; as errors in the measurements of certain pieces may occur by a misinterpretation of the plans due to inadequate lighting, lack of calibration elements, among others.

At this point, the company should emphasize in defining what are the most critical processes, the processes that give the best value for customers and competitive, the rapidly improving of their processes, benefits of incorporating or modify their processes, contemplating the possibility to take ideas from other industries.

As mentioned above by A. Thompson [9], a general technique for the evaluation of strategic resources is by identifying stren-

gths, weaknesses of resources, opportunities and external threats, this technique is known as the SWOT analysis. To identify the competitive strengths the company must identify those competencies that are done well and the difference in the market (these will serve as support for building a competitive advantage). A point of convergence between the concepts of Thompson and Hamel, is defined as the first basic concept that the ability of a company to be successful in the market depends largely on the competitive power of its resources: the set of skills, abilities and competitive assets, if available. While G. Hamel, believes in the proper management of assets to achieve business innovation.

In the analysis of the weaknesses, one should look for what the company is missing or is not doing correctly and that can place it in a not advantageous market position.

Configuration

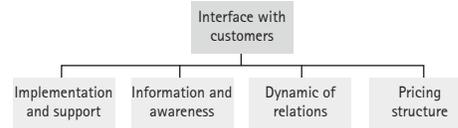
Depending on how the interaction is achieved between resources, it would be accomplished with the strategy alignment allowing it to take place.

The strategy must be questioned by configuration management of interfaces between the various assets, knowledge and processes. The company must check if it has personnel for setting up strategic resources in an unconventional way to get benefits from it. Finally, research other settings different than those currently used [11].

This is a wakeup call to look beyond the business scope, at this point, the company can use techniques for generating ideas like those mentioned by Rodrigo Varela [12] among others, that can take the business to innovate with a new product or different concept.

Customer interface

Graphical representation of the customer interface



Source: Own based in Gary Hamel's business model

Implementation and support: As mentioned above, this is the way the company manages to reach customers. And this is a point where it can perform a strong job, due that the marketing area value has decreased. It is necessary to have well defined segments and activities to be developed to learn about new products, to remind the customer that the company has developed and to persuade them to close the negotiation process; plus the sales team must have all the tools to be effective at negotiation.

For example, by using the internet, it is possible to pay for the design of a webpage no matter the location of the company. So that the customer, prior visit, can see a video or a 3D animation explaining how the product works, resulting in implications in terms of efficiencies for the business. This would help shorten the process of negotiating in order to have a high probability of closing the deal.

It is necessary then to consider the best strategy to reach the customer, the work done by the client to get the products, the planning process within the company to benefit the customer; facilities for the buying process to be simpler and more enjoyable; to evaluate the possibility of designing the process from user conditions; to reduce research costs and; to provide non-confidential information that customers can use to compare with the competition.

Information and perception: Due to the availability of access to current technology, it is possible to develop simple databases with established and potential customers in order to create strategies developed with these. At this point, it should be questioned whether it is possible to increase the current customer relationships through "you win, I win" agreements that lead to benefits for all.

For example, if the ASMETALES guild manages to summon and entice more companies across the bargaining power it has with considerable number of companies, it could gain scale economies and offer its customers a development product of a low cost and with high innovation. Then, it could gain positioning and become a successful business.

The company should define what information it needs from its customers and create a database that allows the company to take every opportunity to improve knowledge, needs and their desires. This plan must be set up if enough information is given to the client to make accurate decisions on their purchase.

Relationship dynamics: At this point, the contact with the customer, how well the company knows them, and how deep are their relationships.

It is possible to achieve a long-term relationship with customers by developing new products that provide efficiencies, because it generates a high level of confidence. And so, companies see an ally in their supplier or strategic partner, which strengthens the goals of each and in turn, facilitates a series of events as negotiation processes and a decreased time on strategic decisions.

It is very important to identify the way of contact with the customer and how easy it is for them to communicate with the company. It is very common that customer re-

quirements are not fully transmitted to the appropriate department and that represents reprocessing. Such is the case when the client asks to design a product where direct communication with them allows to determine their wishes, and in turn it can make recommendations to facilitate the manufacturing process in order to reach an agreement where both parties are satisfied.

It is inevitable for the company to know how they customers feel, in terms of products and services. A good technique is to inquire about the two most rewarding experiences for the customer and visualize how to duplicate them [29]. Therefore it has to be reviewed what has been invested in the client, revitalizing their experience in ways that strengthen their affiliation. All this leads to raise expectations and achieve competitive advantage.

Pricing structure: As starting point, the study points out this particular phrase: "What one charges and what the customer believes they are paying, are often very different things" [29]. But if this gap can be shorten, success is assured.

With the passage of time and change in processes, it is increasingly common that customers become more demanding and are unwilling to pay for a product, instead, they expect an added value.

For example, in the case of mold making is very likely that the customer only wants the end result, which is the plastic product and does not want to go into more detail. Then, the company could be responsible for anything that involves this development as mold design, manufacture and fit, the selection of the injection machine, testing and commissioning for the mass production of the product. Determining the payment structure in a different way, as well as providing

the plastic part provides a integrated service, which would be charged separately, but will generate a total customer satisfaction.

Accordingly, the company should evaluate what is actually charging the customer, defining the dominant pricing paradigm in the industry and consider breaking it. It should better balanced, what is offered and charge what the customer really appreciates, obviously with the profits that the company has projected [13].

Customer benefits

At this point, the company should evaluate how the strategy is really providing value to the customer. When the target groups have been identified, it is easy to identify needs, tastes, customer preferences through market research. In this way, it manages to deliver those benefits that the customer is expecting. Usually, when this happens, the companies are able to deliver greater value for products offered or services rendered.

For example, the engineering sector has grown hand in hand with the sugar refinery plants (*ingenios*, is the term used in Colombia) and it is possible through experience and by listening to the customer, to design a machine using reverse engineering, so that the *ingenios* can produce a smaller mill (*trapi-che*) with the expertise of the big refineries. Then, these products are offered to micro entrepreneurs or farmers in Colombia that use small machines but want the efficiencies of the greatest.

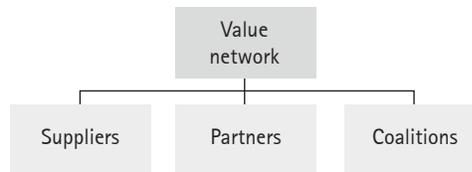
The customer should be benefited and appreciate these benefits. The company should determine if there are other suppliers that the customer might value. It should also define the basic need to attend and if it is set widely enough. The aim should be to change

the set of benefits so it surprises customers and frustrates competitors [29].

Network value

As Gary Hamel explains, the network value refers to the network surrounding the firm and that complements and extends its resources. As these actors are outside of the company and the control over these is not total, any progress made on the design and management can be an important source of innovation.

Graphic representation of the network value



Source: Own based in Gary Hamel's business model

Suppliers: At this point, it should be analyzed how beneficial are supplier relationships, because with a good development of trade links with these, creating a "win-win" deal can be achieved with agreements that facilitate the production or the different processes. For example, *Dell* requires that its suppliers are located no more than 90min of factory facilities, to avoid having large inventories [14].

Taking this to metal mechanic service, it would be very difficult to have a large warehouse of steel to meet customer needs (even when these tasks are emergencies). Still, it is possible to perform in a more coordinated way, as mentioned above, where the maintenance is planned, to have the raw material at the right time and not have to wait after the request.

Providers should take advantage efficiently as a source of innovation. This should be considered an integral part of the company's business model. Added to this, it must gain competitive advantage in the way it handles the link with the providers [29].

It is very important to define what activities are enriching the company's business and which of these can be transferred to the suppliers without giving them a competitive advantage; such as the construction of molds or cutting tools. A company can buy the plates rectified and ready to be used, thus shortening the development time and avoiding having rectifiers between their computers or having to find someone to provide them this service.

Partners: "The partners provide critical complements to a final product or a total solution. An imaginative use of partners can be the key to a revolution in the industry "[15], so the company must look for strategic partners who can help it get stimulated.

For example, if the company fails to have a staff of engineers, it could be associated with a group of these to complement their services, where each move works. That is when the company needs to make a major effort involving an engineering analysis, then the company should contact its partners to take charge of this part, and thus be able to offer an integrated customer service, so at the end, there would be three beneficiaries.

In order to join partnerships, the company must be aware of the capabilities of others that can be leveraged in favor. Some providers may want to become partners, but for this to happen they must also take on responsibilities that may be at an economic level. If such, in a development project with a fairly large investment, the partner may be involved financially to help this succeed.

The company has to evaluate the opportunities that would be presented if they could borrow the assets and capabilities of another company and combine it with their own. This slogan aims to rely on partners to leverage its capabilities and offer a more complete solution to their customers [29].

Coalitions: As the name implies, is when the company needs the support of several competitors with a common interest: to develop a project, as is the case when the problems of investment or technology are very large, or when the risk is high; losing in a game in which the winner takes all.

In *Valle del Cauca*, state where Cali is located, there is a great reluctance to working together with other companies, as observed in the results of the survey, for fear that customers are taken or that will leak information. The possibility of focusing on the development of more difficult on a specific product and leave the rest to another company in a cooperative should be determined, freeing capacity for these machines to be used used in more complex tasks.

For example, when a large company provider in the assembly of a new plant is required and demand is out of proportion, it is preferable to form a coalition than to cede business to firms in other regions with a higher capacity.

The company must be viewed beyond their own resources and markets and imagine new combinations of resources able to create new markets and services. Undermining the opportunities there to provide resources in new ways and thus invite other firms to form a common cause. It is possible to toggle the competitive dynamics of the industry to use a coalition to carry a high risk project to the realm of the feasible. This coalition must envision the possibility of attacking the position of a well-entrenched company [29].

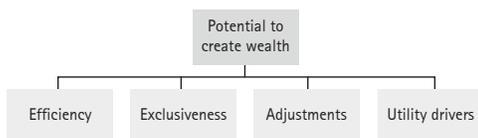
Company's boundaries

At this point the company has to know very well their capabilities, how far they want to go and have the ability to determine what they can and should do, as well as what it should get from suppliers, partners or members of the coalition. But also, it helps to be revising these continually, as a change in the boundaries may mean a generator of innovation. For example, with globalization, new suppliers or products that simplify daily operations may be constantly found, processes can be shortened finding raw materials with improved properties, among others.

It should be examined with a critical eye where to draw the line between what the company actually does and what it does not do. This leads to have options to change the rules of the industry, considering alternative boundaries to contemplate new commercial concepts [29].

Wealth potential

Graphic representation of the potential to create wealth



Source: Own based in Gary Hamel's business model

Efficiency: Here is the meaning of what is done, but if it's possible that the customer pays a fair price (where this exceeds the cost of producing it) for services offered, then it will be profitable. Based on primary information that managers of small metalworking companies know that the best way to reduce costs is to standardize the production, and this is achieved if they can design a product

that meets customer needs and also having a market capable of generating profitability and sustainability in the long term.

For example: if the company has worked on metallurgical development with a food company it could design a standardized product for all micro, small and medium enterprises from the food sector. If the production can be standardized and deliver a required product for many small customers, this could reduce prices and it will not work for one company but for many, accomplishing efficiencies and profitability, plus an attractive business for these businesses with fewer resources.

The company should verify the assumptions that the company has raised about the value that customers get from their products and/or services, understanding in detail the costs that are incurred in order to provide a final value under both parties. [29]

Exclusivity: What finally should be achieved, is that the product and/or service offered is different from the one that offers the competition. For example in the metal mechanic industry, it could be argued that all companies do the same, but what if, thanks to the experience acquired over time, a product that can be developed only by the company for many other ones of any sector in particular?

As the industry is very fragmented, there is no "cannibalization" between them, the guild *Asmetales* could mediate and differentiate companies between experiences by sector, so that a small group of companies can develop products and services for a specific sector and others can be working for other sectors such as sports equipment.

The company then must define how far away it should shift from their concept of the average industry, and identify points of difference in the main components of this concept.

The goal is that these points of difference bring new benefits to customers [29].

Settings: It is time to look at everything as a whole and determine how aligned are all previously evaluated points, because if any of the elements of the structure acts independently, the results are not the best. Therefore, all elements of the business model should reinforce each other preventing contradiction from each other. There is something to be avoided as it may seem abnormal for customers.

Utility drivers: what is being evaluated here is a business that is expected to be profitable, so finally, a few key points are being developed that can help increase the profitability of the company including some of those in the business concept. For example, an idea that may sound far-fetched in the engineering industry would be to seek to create a monopoly, only temporarily, in order to enable the development of a unique product.

- a. **Increasing returns:** These create a virtuous cycle fueled by three underlying forces: network, positive or feeding, and learning effects. For example, in the case of network effects which can be searched is leveraging social networks, which now are being so busy to get the information of the company and its services to a larger number of potential customers. The positive effects of feeding include the use of information obtained through databases, for example, if potential customers are surveyed about their preferences in the service or features that they give more relevance to the learning impact, it means to put in action all the information collected.
- b. **Closing the road to competitors:** At this point, the company should work on building barriers for competitors entering the

same market. This tool is very usual in technological research and development which is their main fort, and, when it is possible to patent or get an advantage over competitors in the development time. However, moving this concept to certain engineering sector would follow or explore alternatives: for example (because in this industry it is very common for an employee with sufficient knowledge of the company decides to retire and set up his own workshop) the employer must seek a differentiating factor, as the delivery of the products to their 3D models or even making the design improvements that extend the life of the parts, or also anticipate creating agreements with companies looking for exclusivity.

- c. **Strategic Economies:** At this point, the company should combine these three concepts: scale economies, focus and scope, as it must find the balance between these concepts to not deviate from the target. For example, when trying to maximize the capacity of the plant, decide to make parts that are available in the market at a lower cost and with a good quality, such as nuts or bolts, which would be losing focus from the core of the company's philosophy, for believing that the business is saving on costs.
- d. **Strategic Flexibility:** It should it seek to maintain a flexibility to reorient the strategy according to the needs of customers and the use of new technologies. For example, thanks to the developments in engineering plastics which are currently replacing many metal parts (in steel or cast iron) due to its low cost and ease of mass production, which implies that there is an increased demand for part modeling and development of molds for machining parts, which can lead the company

to another redirection and acquisition of knowledge.

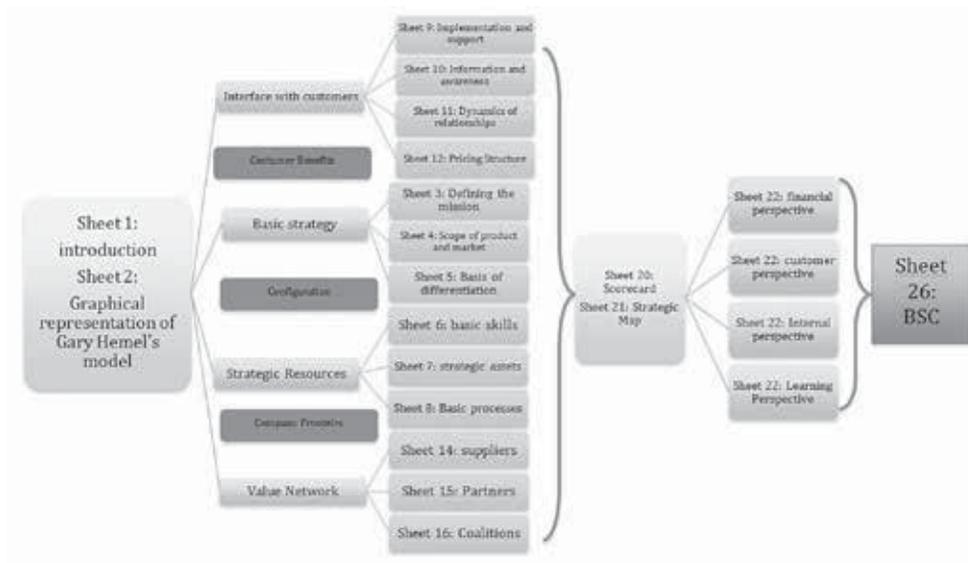
Proposal of the adaptation of Gary Hamel's business model theory to be implemented in small companies of the metal mechanic sector

An excel simulator was created under the Gary Hamel's business model theory to help the entrepreneur understanding the adaptation of the model to the small companies of the metalmechanic sector, this tool is ready to be implemented in a small company category of the metal mechanic services sector.

Below it is introduced a brief description of what can be found in the tool.

To develop this tool, there was designed a calculation table, to which were added several sheets properly labeled. A total of 27 grouped sheets were used, differentiated by colors differentiating.

- In the first two sheets there's an introduction to the orientation of the entrepreneur and the Gary Hamel diagram is presented.
- Within 16 sheets model is developed, defining each of the concepts developed. A few questions are launched that will allow the employer to question the current performance of the organization and that one that he would like to perform in the future. An orientation or example is presented and finally, a space of decisions is considered to determinate each item.
- On sheet 20 there's a scorecard where the work is summarized and the model is linked to a BSC model (Balanced score card), which orientates the entrepreneur to determine the objectives to be achieved by each of the perspectives presented.
- The strategic map is presented in sheet 21.



Source: Own based in Gary Hamel's business model

- The four next sheets, develops each of the perspectives.
- On sheet 26 is finally presented the BSC where is expected that the person can track their targets.

This adaptation can be seen in next link:

https://www.dropbox.com/s/onj7e-7kfyrobb0/Modelo_de_negocios_de_Gary_Hamel_aplicado_al_sector_metalmecanico%20final%281%29.xls?dl=0

Conclusions

Many metalworking companies are oriented to production and not the market. This model seeks a creative way, to get the most out of the potentialities of all these companies in the sector, but due the difficulty to stop along the way and engage in planning and meeting the new challenges that will face the arrival of new trade agreements with various countries in the world, the companies do not do it.

The model proposes that after applying the Gary Hamel theory it can make a link with Norton and Kaplan's strategic maps with indicators of management tools that will help the employer to accomplish their purposes more easily.

It is considered that by implementing the model, employers will see new ways to compete in the market and not necessarily with the creation of products and services, but with innovation in the business model, which has been documented worldwide by currently successful, large companies. In its methodology, these models can be designed effectively in small companies, which is the objective of this paper.

Such models can emerge from the systematic development of the proposal that has

been made. Each step will allow the employer to see unexplored niche competition, and that if it reaches at first, could have prices in line with innovation, be very profitable and grow in an organized manner. Perhaps also, partnering, acquiring or merging with other companies, in order to meet those challenges that will come with the opening of the Colombian market to the global market.

The President of *Asmetales* Guild could serve as a bridge to develop a pilot project and try to influence several of the companies in the sector to implement the model, although the company *Payan and cia. Ltda* who is the market leader in small business, was interested in implementing this model, this would help to prove the effectiveness.

If the *Asmetales* guild achieves results quickly, this model could be replicated by many of SMEs from different sectors of the economy, and that would be a revolution in business thinking.

This exercise contributes to the growth of SMEs, because of these companies depends the employment and income of many Colombians who work and are associated with them. Anyway, it should be noted that among some of the limitations in the implementation of this model are the academic training of entrepreneurs and the time available for the development of the tool.

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