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BUSINESS MODELS CHANGES: A STUDY OF THE CONNECTPLUG

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1. INTRODUCTION

Business models have grown in significance over the past few years (WIRTZ et al., 2016). Many authors mention that previous to the dot-com boom, which happened around the year of 2000, the term business model was hardly used (AMIT; ZOTT, 2001; DOGANOVA; EYQUEM-RENAULT, 2009). That growth in significance created a scenario where the term business models received a large amount of definitions over the past years, and as stated by Wirtz et al., (2016) those definitions are not always consistently applied.

Considering this large amount of definitions, two research streams (one that see business models as being a static entity, and another one that see business model as a dynamic entity) are identified over the literature. Over the recent years however, the stream that consider business models to be a dynamic entity has gained more prominence (Wirtz et al., 2016). Within that stream, Voepel et al., (2004) provide a differentiation between business model modification and business model reinvention, where the first one is related to more superficial changes to the model, and the last one is related to in-depth changes that can also result in entirely new business models. That perception is expanded by Cavalcante et al., (2011) which points that four types of business models changes can occur within an organization: (1) creation, (2) extension, (3) revision and (4) termination. The author also points that the early changes of a model will be more influenced by the entrepreneur prior education and experiences. And as times passes by, the company will have a tendency to create new business models instead of revising existing ones (CAVALCANTE et al., 2011; KIM; MIN, 2015).

Considering that, within these paper we aim to address how companies change their business models as times passes by, while at the same time we shed some light to the research calls from Wirtz et al., (2016), who states that the relationship between the entrepreneur and the business model should be more explored.

We thus provide a discussion about the concept of business model, its various definitions and the research streams identified over the literature according to Massa et al., (2017); Wirtz et al., (2016) and Baden-Fuller and Haefliger (2013). After that, we address the literature related to business models changes, where the concepts of business model modifications and business models reinventions are explored. The reviewed literature results in a framework that points out that early business model changes are highly shaped by the entrepreneur prior experiences and education (SOSNA et al., 2010; CAVALCANTE et al., 2011), and as time passes by the organizational inertia (HANNAN; FREEMAN, 1984) and path dependency (NELSON; WINTER, 1982) will arise, thus making it more difficult for changes to happen, which thus results in an increase to the tendency of the company to create new business models (CAVALCANTE et al., 2011; KIM; MIN, 2015).

In order to further analyze this framework, we performed a case study with a Brazilian company from the Enterprise Resource Planning / Business Intelligent (ERP/BI) market named ConnectPlug, where we aimed to conceptualize the company business model and also understand how business models changes occurred at the company. The results demonstrate that the framework created based on the literature is aligned with the business model changes that occurred at the company, thus providing practical example about how business model changes occurs in a company as times passes by.

For a better understanding, this paper is structured as follows. Section two contains the theoretical background of our study. Section three contains its methodology. Section four describes the case study performed. And section five provides our conclusions, thus relating the literature to the company analyzed.

2. THEORETICAL BACKGROUND

2.1. Business Models

Although business model is a research field that received a large amount of academic attention over the past years (WIRTZ et al., 2016), the problem of having a general acceptable definition, which roamed this research field at its early days (CHESBROUGH; ROSENBLOOM, 2002) seems to persist nowadays, which results in a large amount of academic discussion about a concise definition for the term business models (LAMBERT; DAVIDSON, 2013). This created a scenario where the term currently has a large amount of definitions, none of them being considered the 'most correct one' (MASSA et al., 2017).

Thus, in order to provide a better understanding of these definitions and also to explore why there's a lack of agreement to a general acceptable definition for the term, Massa et al., (2017) performed a bibliographic review of the last ten years of literature related to business models, where the authors were able to identify three main interpretations streams for the term business models: (1) business models as attributes of real firms; (2) business models as cognitive/linguistic schemas; and (3) business models as a formal conceptual representations of how a company do business (MASSA et al., 2017).

The first interpretation stream defines the business model as being a real attribute of a company, thus being an empirical phenomenon characterized as something explicit within the company itself. The second interpretation stream, on the other hand, consider that the manager or entrepreneur only have a 'picture' of the real model, resulting in a model that is extremely shaped by their cognitive aspects, which thus result in an interpretation line that consider the model to be way more implicit than explicit. And lastly, the third interpretation stream act as an anchor between the first and the second streams, where it's considered that the business model is shaped by the managers or entrepreneur cognitive aspects, but its representation is used in an explicit way to describe the business model itself (MASSA et al., 2017). Table 1 summarizes some definitions for the term business model, classifying them according to the three interpretations streams identified by Massa et al., (2017).

Those three interpretation lines are, according to Massa et al., (2017) one of the reasons of why there is a lack of a general acceptable definition for the term business model within the literature. However, the authors also point another issue that contributes for this situation, which is the debate over the concept of business model and the concept of strategy. Thus, according to the Massa et al., (2017), two main academic positions can be identified for that situation. The first one considers business model to be a research stream that is just, on the authors words, "old wine in a new bottle" (MASSA et al., 2017.pp. 89), which thus state that the literature of business model adds very little to the organizational literature, since the topics that it address were already previously discussed within the strategy literature (e.g. PORTER, 2001). The second position, on the other hand, consider business models as a separate research stream from strategy, thus stating that business models and strategy are two distinct constructs and each of them have their contributions for the organizational literature (e.g. CHESBROUGHT; ROSENBLOOM, 2002; TEECE, 2010).

According to Massa et al., (2017), the research stream that consider business models and strategy to be different constructs gained more prominence over the past years, which thus helped to consolidate the business model research stream that we´ve nowadays.

However, although it's been widely accepted that the research stream of business model deals with different concepts than the research stream of strategy (MASSA et al., 2017), it does not mean however that strategy concepts are not discussed within the business model literature.

TABLE 1 - Some business models definitions and their classification according to Massa et al., (2017)

DEFINITION	AUTHOR	CLASSIFICATION
"An organization's approach to generate revenues at a reasonable cost, incorporating assumptions about how it will both create and capture value."	GAMBARDELLA; MCGAHAN, (2010)	First interpretation line
"Set of activities, as well as the resources and capabilities to perform them, within or beyond the firm through cooperation with partners, suppliers and customers."	ZOTT; AMIT (2010. p.217)	
"A model that should fulfill the functions of value proposition articulation; identification of market segments; detail revenue generation and mechanisms; define the structure of value chain required to create and distribute the offerings an complimentary assets; and formulate competitive strategy."	CHESBROUGH (2010. p.355)	
"The heuristic logic that connects technical potential with the realization of economic value."	CHESBROUGH; ROSENBLOOM, (2002. p.529)	Second interpretation line
"A model that summarizes the architecture and the logic of a business."	VELU; STILES (2013. p.443)	
"The systems of activities by which a company create and capture value"	MARTINS et al., (2015. p.99)	
"Articulates the logic, data, and other evidence that support a value proposition for the customer, and a viable structure for the revenues and costs for the enterprise delivering that value."	TEECE (2010. p.179)	Third interpretation line
"A conceptual tool that contains a set of elements and their relationships, thus allowing the expression of the business logic from a specific firm, containing a description of the values that the company offers in order to generate profitability and sustainable revenue streams."	OSTERWALDER (2004. p.15)	
"A simplified and aggregated representation of the relevant activities of a company. It describes how marketable information, products, and/or services are generated by means of a company's value added component."	WIRTZ et al., (2016. p.6)	

Source: The authors (2018), adapted from Massa et al., (2017).

This is demonstrated at the study of Baden-Fuller and Haefliger (2013), where the authors explore the relationship between business models and technology innovation, thus pointing that when considering these two constructs, two research streams can be identified. The first one sees business models as being a part of the strategy and at the same time as something intertwined with the technology, where usually it´s discussed concepts such as 'novel' and 'efficient' business models. According to the authors, this first stream encompasses for example, the definition provided by Osterwalder (2004). The second one, on the other hand, consider that business model is a construct that is completely separated from strategy and also from technology, which thus includes the business models definitions provided by Chesbrough and Rosenbloom (2002), Teece (2010) and the authors themselves (BADEN-FULLER; HAEFLIGER, 2013). At the authors perspective, due to the fact that the second stream handles business models and technology separately, that stream has the potential to answer the question posed by Chesbrough (2010), regarding when do novel technologies requires a novel business models to be commercialized; and when novel business models generated from novel technologies indeed result in advantages for the company (BADEN-FULLER; HAEFLIGER, 2013).

Thus, aligned with that second research stream, Baden-Fuller and Haefliger (2013) constructed a business model perspective composed by four dimensions (customer identification; customer engagement; value delivery and monetization).

The first dimension emphasizes the need that modern technologies have to prompt identify customer and users, thus allowing the identification of who will pay for the service being provided.

The second dimension stress the need of sensing the customer and user needs, thus establishing the value proposition for them. At that dimension, the authors emphasize the distinction between project based offerings and pre-designed (scale) based offerings, where the first one has its routines designed to be more flexible, thus being characterized as bespoke projects to the customers; and the second one on the other hand, is designed to be less flexible, thus offering a product based on scale for the customers.

The third dimension is defined as being the value proposition that is delivered to the customer, which is thus described as the linkage between the identification of customer segments and their needs at one hand and the monetization of the model at the other hand.

This leads to the fourth dimension, also labeled value capture by the authors, where it’s stressed the importance of complimentary assets (TEECE, 1986), as those can leverage monetizing opportunities, especially with ‘razor blades business models’, where an item is sold at a lower price to increase the sales of a complementary asset or good) (BADEN-FULLER; HAEFLIGER, 2013).

Upon that perspective, the authors stress that the connection between business models and technology is two-way and complex, because business models influence the way technology is monetized, and at the same time the frame that managers hold in their minds determine the way technology is developed within the company and the business model itself.

That relationship between business model and technology is also explored by Writz et al., (2016), where the authors stress that, within the research line that is related to technology oriented business models, two different streams can be identified. The first one encompasses authors from a very early technological orientation, which consider that the business model represent a small part of the company, thus resulting in a model that have a very detailed viewpoint. The second one encompasses authors from modern technological orientation, which thus see business models as a more abstract tool, which end up by increasing the representation of the company.

An example of such broader perspective according to Wirtz et al., (2016) is the Osterwalder (2004) perspective, known as business model 'canvas'. That perspective is composed by four main pillars (Product; Customer interface; Infrastructure Management and Financial aspects), and inside those main pillars there´re the nine building blocks that represents the business model itself. At table 2 we´ve summarized those four main pillars and their nine building blocks.

TABLE 2 - The pillars and building blocks of the 'canvas' perspective.

PILLAR	BUILDING BLOCKS OF THE BUSINESS MODEL
Product	Value Proposition
Customer Interface	Target Customer Distribution Channel Customer Relationship
Infrastructure Management	Value Configuration Capability Partnership
Financial Aspects	Cost Structure Revenue Model

Source: The authors (2018), adapted from Osterwalder (2004).

Within that perspective, the product pillar contains the 'value proposition', which is considered the central building block of the canvas perspective, thus representing what the company will be offering to the customer in order to have the value created, which can be something quantitative (eg. price or cost savings); or qualitative (e.g. customer experience or accessibility to product or service).

At the customer interface pillar, the 'target customers' refers to the customer segment that the company is aiming to offer the value; the 'distribution channels' represent the means to get in touch with the customers in order to deliver the value proposition; and the 'relationships' represent the way that the company will deal with their customers.

At the infrastructure pillar, the 'value configuration' describes the activities, arrangements and resources that are necessary to create value for the customer, which can be human, physical, financial or intellectual resources; the 'capabilities' represents the ability that the company have to execute a repeatable pattern of actions that are necessary to deliver the value for the customer; and the 'partner networks' represents the relationships that the company establishes with other companies in order to assist the value creation for their customers, which can result in an optimization of the model, cost savings, risk and uncertainty reduction, and also in an increase on knowledge base through resources share between the partners.

And lastly, the financial pillar contains the 'cost structure', which represents all of the money that is employed on the business model; and the 'revenue streams', which represents the description of how the company makes money through the business model, thus financially demonstrating the result of the value being delivered to the customer and the customer needs being meet (OSTERWALDER, 2004).

That canvas perspective is widely by practitioners in the organizations, and much of the reasons for that is the fact that it has a relatively simple interpretation, thus resulting in an easy framework to be used. Thus, a large number of companies tend to use that perspective of business models to describe their business (OSTERWALDER; PIGNEUR, 2010).

However, as already mentioned by Baden-Fuller and Haefliger (2013), that perspective does not allow one to address the questions posed by Chesbrough (2010). Considering that, for this paper we adopted the business model perspective proposed by Baden-Fuller and Haefliger (2013), where business models are defined as "a system that solves the problem of identifying who is (or are) the customer(s), engaging with their needs, delivering satisfaction, and monetizing the value" (BADEN-FULLER; HAEFLIGER, 2013, p.419).

Considering that, at the next section we aim to better explore the literature related to business model changes.

2.1. Business Model Changes

The literature related to business models changes point to a direct relationship within the research stream that consider the business models as being a dynamic entity. Wirtz et al., (2016) explore the differences between that research stream and another one that that consider the business model as being a static entity. According to the authors, most of the literature have characterized business models as having a static perspective. However, a recent body of literature is now giving more emphasis on the dynamicity of the business models (CAVALCANTE et al., 2011; PUTTEN; SCHIEF, 2012; BADEN-FULLER; HAEFLIGER, 2013).

That dynamic stream considers that the business model is a tool that can promote the change and innovation within the company, as it can be changed and adapted as time passes by (DEMIL; LECOCQ, 2010).

Considering that dynamic perspective, Voelpel el al. (2004) provide a distinction between business model modifications and business models reinventions. According to the authors, modifications are merely improvements of already established business models, while reinventions are related to more in-depth changes or even the creation of entirely new business models, where usually the terms 'disruptive technologies' or 'change of the game rules' are involved (HAMEL, 2002).

Cavalcante et al., (2011) thus go a step further by addressing the connection between business models dynamics and innovation, pointing that only changes that affect the core business of a company will reflect in changes within the company business model. Using a process perspective, the authors point that four types business models changes can occur within an organization: (1) creation, (2) extension, (3) revision and (4) termination. At table 3 we´ve summarized the main characteristics of those four types of changes.

Considering table 3, within the creation of a business model, one can thus note the importance of the individual characteristics of the entrepreneur to the business model, since the creation of a business model is characterized as a mapping of the key elements of the model, which is composed by the entrepreneur mindset and cognition.

Within the extension and revision, one can thus note that as time passes by companies will have more difficulties to have them performed, especially regarding the revision, since organizational inertia (HANNAN; FREEMAN, 1984); path dependency (NELSON; WINTER, 1982); cognitive manifestations (ISABELLA, 1990) and power and politics (EISENHARDT; BOURGEOIS, 1988) are factors that contribute for a company to avoid a revision of an already established business model. Thus, the dynamicity of the business model will rely on the individual ability to identify the need for a change and actively promote that change within the organization (LINDER; CANTRELL, 2002; CAVALCANTE et al., 2011).

A direct relationship can thus be established between the 'age' of the company and the inertia forces that will act upon it, since as time passes by, the organization tend to reinforce what it currently is, thus resulting in a scenario where incumbent companies tend to maintain their *status quo* (FLIGSTEIN, 1996). To the dynamicity of business models, this results in a scenario where incumbent companies tend to implement new business models instead of revising already existing ones when dealing with novel products or technologies (CAVALCANTE et al., 2011; KIM; MIN, 2015).

TABLE 3 - The four types of business model changes according to Cavalcante et al., (2011)

BUSINESS MODEL CHANGE	CHARACTERISTICS
Creation	Transition from business ideas to the materialization of the business model. Initial idea resides in the mind of the entrepreneur. Several modifications before go into practice.
Extension	Addition of new activities or extension of already existing process. Exploitation of commercial opportunities as a key driver. Company should have already defined its core repeated process. Involves the operation over a wide area and related to working practices.
Revision	Intervening into existing process. Removal of something that modifies the existing business model, which may request a new process to be added. Involve the change of existing working practices. Can happen due to a currently inefficient business model, commercial opportunities, actions taken by the competitors, and newcomer companies that posed a thread thus demanding adaptation.
Termination	Abandon or removal of process that results in the termination of the business model. Can happen within a business area or a business unit as long as they have their own business model.

Source: Authors (2018), adapted from Cavalcante et al., (2011)

Kim and Min (2015) demonstrate at their study that incumbent companies tend to add new business models instead of revising existing ones, however, the authors identify that although those companies tend to respond to disruptive changes by adding a new business models, not all incumbents perform better after the new business model addition, thus pointing that for the company perform better a simply addition of a new business model is not enough, as asset orchestration and the time of business model addition is directly related to the company performance.

The study of Chesbrough and Rosenbloom (2002) also demonstrates that. However, at their study the authors identify that the Xerox company was able to innovate and increase its performance by exploring new business models through spin-off companies instead of revising or adding new business models directly at the main company.

The fact that incumbent companies tend to respond to changes within the addition of new business models does not mean however that those companies does not change their already established business model. The study of Sosna et al., (2010) demonstrates that companies tend to innovate their business model through a trial-and-error process, thus trying to adapt their model to counter the threats posed by the market and by other companies. But as already mentioned, that process of trial and error tend to be more frequent within newly companies, as at those most of the organizational lock-ins are not yet established.

To summarize, on a newcomer company its initial business model also tend to be designed with severe influence from the entrepreneur prior education and experiences (SOSNA et al., 2010; CAVALCANTE et al., 2011), which result in a scenario where the first business model of a company is more like a proto-strategy based on the individuals previous experience (CHESBROUGH; ROSENBLOOM, 2002; SOSNA et al., 2010; CAVALCANTE et al., 2011), and as times goes passing by, the organizational inertia (HANNAN; FREEMAN, 1984); its path dependency (NELSON; WINTER, 1982); the cognitive manifestations (ISABELLA, 1990) the power and politics (EISENHARDT; BOURGEOIS, 1988) and other organizational lock-ins will start to gain prominence, thus resulting that in an already established company, the business model is more cognitive bounded upon the organization itself, as its filtered through the heuristic logic that the company establish from previous business model creations and modifications, and also from organizational routines (CHESBROUGHT; ROSENBLOOM, 2002), thus resulting in an increase on the tendency to have new business models created instead of the revision of already existing ones (CAVALCANTE et al., 2011; KIM; MIN, 2015).

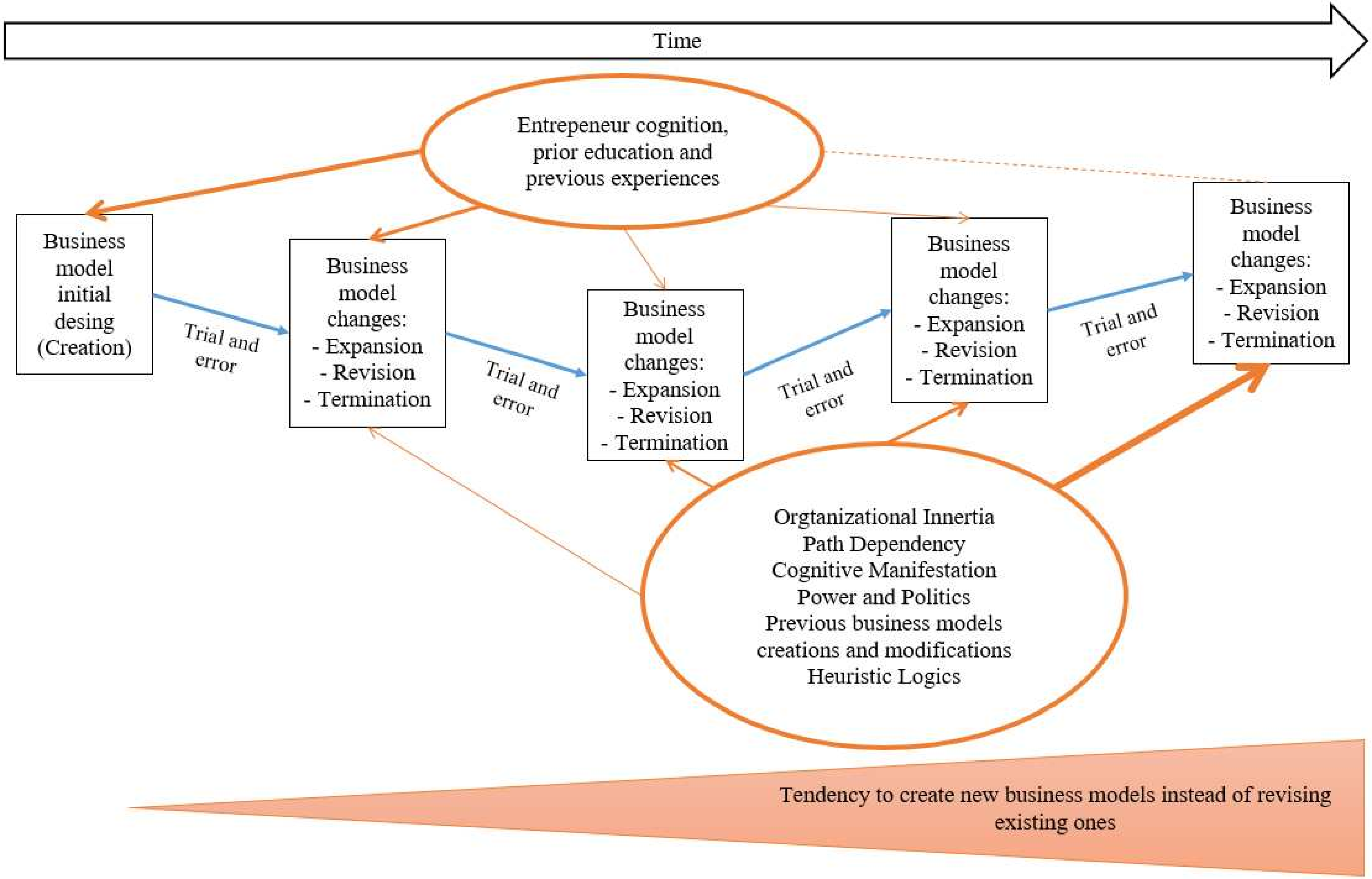
Also, since creativity and innovation tend to emerge from passion and non-rational pursuits as well as from unusual sensitivity to discover and disclosure from employees, managers and entrepreneurs (BADEN-FULLER; HAEFLIGER, 2013), the organizational lock-ins also contribute to the organizational inertia since the individuals will be more bounded to the organization itself.

At figure 1 we´ve summarized that scenario, where the creation of the business model and its early modifications are strongly influenced by the entrepreneur cognition and its previous experiences. However, as time passes by, that influence tends to be reduced as the organizational inertia, the path dependency, the cognitive manifestation, the power and politics, and the previous business models creations and modifications will increase its influence over the business models changes, which thus result in an increase on the company tendency to create new business models instead of revising already existing ones.

Considering figure 1, it can be noted that the entrepreneur cognition and his previous experiences will continue to influence the changes taking place at the company, but as mentioned by the Chesbrough and Rosenbloom (2002), those cognitive aspects will be filtered through the heuristics logics (PRAHALAD; BETIS, 1986) that are established among the employees and the company itself, which thus results in only a small influence when compared to a newer companies since at those the heuristics are not yet established. The reason for that influence not disappear completely is that even though the heuristics of the company are present to filter the employee perception, his own cognitive level cannot be entirely removed. In other words, although heuristics may filter the perception that is constructed by the employee, a part of his own cognition based on his own experience will always be present.

Within that theoretical background explored, at the next section we explore the methodology of our study, later presenting the case study performed in order to better explore the framework proposed at figure 1.

FIGURE 1- Framework for business model changes according to the literature reviewed



SOURCE: The authors (2018)

3. METHODOLOGY

In order to better explore how companies change their business models through time, and also to answer the research calls from Wirtz et al., (2016), who state that the relationship between the managers, entrepreneurs and other employees with business models should be more explored, we decided to conduct a case study with a company from the ERP/BI software segment.

Following Yin (2014), our study is thus classified as an empirical qualitative analysis on single case study scenario. Thus, the main objective here is not to generalize the results, but to have a more in-depth understanding about the case being analyzed, which thus assist to provide a better understanding about "how" and "why" some phenomenon occurs at a specific environment (EISENHARDT, 1989; YIN, 2014).

The selected company is named ConnectPlug and its current located in the city of Curitiba, State of Paraná. The selection of that company occurred mainly due to the fact that it presented a considerable growth over the past few years, which reflected in changes to the company size, the number of employees, the revenue streams, their number of available products and in the business model itself, which thus characterizes as a suitable scenario to understand the changes that the company made to their business models as times passed by.

In order to collect the data, semi structured interviews were conducted with one of the company business partner, which has the position of CTO (Chief Technology Officer) at the company. We followed Seaman (1999) guidelines for semi-structured interviews and thus our interviews include a mixture of open-ended and specific questions, designed to elicit not only the information foreseen, but also unexpected types of information. Also according to Seaman (1999), that type of interview is suitable for the scenario being observed, since many relevant Information Technology (IT) related phenomena are often collected using semi-structured interviews.

In order to better address the research problem and also to grant more validity to the study, we conducted two sets of interviews at two different point in times. The first set of interviews were taken between April - June of 2017, where two interview of 1.5 - 2-hour length were conducted with the CTO. The second set of interviews take place one year later, between June - July of 2018, where another interview of 1-hour length was conducted with the CTO. By using that approach, we were able to not just to simply collect information based on the manager cognition about the changes that they had already performed within their business model, but to also have an picture of their business model at two different point in time, which thus helped us to address potential changes and better understand how those changes occurred at the company.

The interviews were recorded in audio and later transcribed by the researchers. Additional notes were also taken during the interviews and additional information was also collected from the company website, folders, portfolios and also from other sources available over the internet and social media.

In order to analyze the data, we used the content analysis method (BARDIN, 1997), thus following the three step process (pre-analysis; material exploration; and treatment and interpretation of data) to have the analysis performed. To further improve the validity, the interview notes and transcriptions records were first reviewed individually, pointing each author consideration and after that the notes and transcriptions were reviewed together in order to discuss about each author consideration and also check if any additional information was necessary. If that was the case, additional information was requested through email or phone calls.

Based on the methodology here described, at the next section we explore the case study performed, providing a description about the company and its business model and also exploring how the company changed its business model through time.

4. CASE STUDY - CONNECTPLUG

ConnectPlug is a Brazilian company that develop, sell and provide support for an ERP/BI system and a few other products that they are currently developing. The company started to do business in the year of 2016, and although the ERP/BI is a market that is quite explored by other companies, that company caught our attention due it´s growth rate. At the end of the first year doing business (2016), the company already had 150 customers, while at the time that the first set of interviews were conducted (June-July of 2017) they already had around 500 customers across all states of Brazil. During the second set of interviews (July of 2018), they already had more than 800 customers with an expectation to reach more than 1000 customer before the end of the year. Due to that growth rate, in the middle of 2017 the company headquarters changed to a large facility, and during the second set of interviews, the CTO stated that they were already planning to acquire a second office to better address their growth rate. During that time, their number of employees also increased from 22 to 27.

According to the CTO, the initial idea for their main product started to be drawn in 2014, when he was contacted by one of his friends (which currently is his business partner at company) to have a GPS tracking device created for pet shops. The CTO, which had previously worked on a multinational company for around five years and later as an autonomous consulting analyst for two more years refused the idea since based on his previously experiences he believed that the idea would not be scalable due to the fact that they would need to deal with hardware parts.

However, he pointed to his friend that a software like an ERP/BI for Pet shops could be scalable. They thus decided to go further with the idea of having an ERP/BI software created. However, to have it done, they realized that they would need to create a generic software. At that time, they also realized (due to a market research) that around 40% of the Brazilian retail companies were restaurants. Thus, based on that market research, they identified a potential market opportunity to be explored, which resulted in a direction of their software to that type of establishment, which thus resulted that nowadays a large part of the company customers are restaurants.

4.1. Business model conceptualization at ConnectPlug

When asked about their business model, the CTO explained that they did not had a formal conceptualization of it. However, their model was familiar to all of their key resources at the company. He thus explained that the reason for not having a formal conceptualization was the fact that their business model had to be constantly modified, especially during the early days of the company.

Thus, aiming to better understand how their model was designed we provide a briefly description of it based on the Baden-Fuller and Haefliger (2013) perspective, in order to later address the business model changes that occurred.

We thus start with the customer identification dimension, where according to the CTO their identification of restaurants as being an opportunity for business occurred through a market research that was conducted. That happened when they were still adapting their business model and their software to have it sold, which thus is aligned with the description of Baden-Fuller and Haefliger (2013), where its stated that a prompt identification of customers is necessary in order to allow the company to monetize the model. Their main customer segment is thus small/medium retail stores that did not had any previously ERP/BI systems, or that already had a system but it was not meeting their needs. When asked about other customer segments (e.g. larger companies), the CTO stated that their software is scalable and can meet the needs of a larger company, but their main customer segment currently displays a large opportunity for growth.

The engagement with their customers in order to sense their needs is also performed by the companies since its early days. At the first set of interviews it was stated by the CTO that "Customer usually contact us requesting changes within the software, but you cannot do everything, some things will represent too much cost for only a little return, so we try to balance that with the customers." At the second interview it was also mentioned that some changes to their software were done due to customer request, thus increasing the functionalities according to the user needs. We were also able to note that small changes related to user requests were more common during the early days of the company, and nowadays their software is already pretty robust for most of their users.

The early identification of customers and users and the capability that the company has to sense their customer needs thus allows the value delivery dimension to occur, where according to the CTO their idea is to sell a software that have better performance and more functionalities with a price that is lower than what other companies offer. Through a comparison of their software with other ERP/BI companies providing similar services, we were able to validate that their software was indeed cheaper than the one provided by the other companies, and the available functionalities overcome most of the other software's available at the market with similar prices.

Within the value delivery occurring, the dimension of monetization (value capture) was also able to occur. The company thus rely on the monthly based subscriptions of their software to monetize their business model, and according to the interview and reports that were presented to us we were able to validate that the value capture was indeed occurring within the company, which thus reflected on the company growth as much of their profit is currently being reinvested at the company itself.

4.2. Business model changes at ConnectPlug

Considering that brief conceptualization of the company business model, we now address some changes that occurred through the years and more specifically during the elapsed time between the first and the second set of interviews.

Thus, considering the business model changes, the CTO stated during the first set of interviews that: "Since 2014, three major changes occurred to our business model and a fourth one is about take place soon. And apart from that, a lot of small changes constantly need to take place in order to face the rapidly changing environment." Also according to the information provided, before the company start to sell its product a lot of small changes were performed at their business model in order to validate it, which was on the CTO words "a trial and error process".

We can thus note that at the company early days of the company they had a more generic model, and due to that changes happened more often than nowadays since now they currently have a more established business model.

However, although less changes are occurring nowadays at the company, the trial and error process is still happening for the changes that still take place, for example with the addition of a new product to their portfolio that occurred between the first and the second sets of interviews. According to the CTO, they already tried some solutions for that product but it did not work out as they were expecting yet, so the trial an error continues until they achieve a more feasible model to commercialize it.

The addition of that new product however did not resulted in an 'reinvention' of their business model. The reason for that is according to the CTO the fact that this product is related to the previously one that they were already selling, thus on the words of the CTO "these two products kind of complement each other", so the business model was only 'extended' in order to include that new product.

Another change to their business model was related to how the company charge its users for the service provided, since during the last year it was identified a need for charging their customers with an extra cost for the first month subscription. That cost is thus related to the initial configuration and training of the software, and according to the CTO the idea is to avoid customers that would probably use their software for only a month. That resulted in a slightly 'revision' of their business model.

Those last two changes that occurred were severely influenced by the experience acquired by the CTO and other business partners at the company itself, since these changes were made based on report, market analysis and according to the CTO "The experience that was acquired after those 2 years doing business at this market segment."

That is the opposite of what happened with the company at its early days, where the business model was constructed considering the business partners previously experiences, their feeling about the market and also considering the observation of other companies that were also selling similar products. That also seems to be related to why more modifications occurred within the early stages of the company, since according to the CTO "back then we did not have the experience that we’ve nowadays to construct and modify our business model, and thus the trial and error process happened more often."

Within the elapsed time between the interviews, we were also able to identify an increase at the customer departments. During the first set of interviews the company only had three departments (development, sales and support), and during the second set of interviews, the company had six departments, thus including pre-sales, financial and customer success to the company structure. The addition of those departments also reflected in changes to their business models, and as those changes happened more recent they were also more influenced by the business partner’s experiences from the company itself. Although their department of customer success was created upon reports that were generate based on the creation of key performance indicators (KPI) and processes for the support department, which happened due to the CTO previous work experience, the modification of the business model was more shaped due to his experience within the company, since according to him "that department was also created due to company information that we were able to collect and properly interpret due to our experience at the current business".

The final part of our interviews aimed to understand the company perspective for the next 10 to 15 years regarding business model changes. Considering that, we first asked the CTO about his perception regarding new product development for the long run at the company. Considering that, he stated that their idea is to have a software factory company, which will thus provide more products and services than they have nowadays. Thus, regarding new products, the CTO stated that in the future they would probably need to explore that with new business models. However, depending on how much different the products are, he would prefer to have it done through spin-off companies, since as stated by him "If a new product is not related to the business that you already have in a company, then you might lose the business focus and make a mess". Thus, in his perception the addition of new products might be done with extensions of an already established business model, but if the product is not related to an already established business, he would prefer to explore that with a spin-off companies. Thus, the CTO stated that he does not believe that having two business models at the same company as something good, at least not if these two business models are related to completely different business scenarios.

5. CONCLUSIONS

Within the case study performed, some interesting points can be noted, first following Sosna et al., (2010) and Cavalcante et al., (2011), we can identify that the company initial business model was more shaped accordingly to the entrepreneurs previously experiences and also from information that they collected by observing their competitors, which resulted in the first model being more like a proto strategy of their business, which is thus aligned with Chesbrough and Rosenbloom (2002). However, as the time passed by at the company, their model started to be more influenced by their experience within the company itself, thus being aligned with the heuristic logics that will filter the employee cognition (PRAHALAD; BETIS, 1986).

We were also able to verify that as time passes by, the number of changes have reduced, with thus assist to demonstrate that organizational inertia (HANNAN; FREEMAN, 1984); the path dependency (NELSON; WINTER, 1982); the cognitive manifestations (ISABELLA, 1990) and the power and politics (EISENHARDT; BOURGEOIS, 1988) will start to increase the influence over the company, thus making more difficult business models changes to take place. This is where the capacity that entrepreneurs have to promote innovation and creativity at the company will start to gain prominence, as he will need to deal with the organization routines and inertia that might prevent the non-rational pursuits and his sensitivity do discover and disclosure to happen (BADEN-FULLER; HAEFLIGER, 2013).

Considering these changes, we identified through the case study performed that the change process within the company business models mainly occurred with a trial and error approach (SOSNA et al., 2010), and that process was more frequently at the early days of the company "Nowadays we do not change our model very often like we did at the beginning" - ConnectPlug CTO.

On the long run however, the tendency for the company to create new business models also tend to increase, as on the CTO words "We aim to be a software factory company, which will thus result in more products and services being provided". But to have it done, the CTO states the need of separate business models and more important spin-off companies, which is thus aligned with Cavalcante et al., (2010); and Kim and Min (2015), where its stated that incumbent companies will tend to create new business models instead of revising already existing ones and also Chesbrough and Rosenbloom (2002), where its demonstrated that the performance of the Xerox company increase after exploration of new business models through spin-off companies.

Considering those new products development, the CTO believes that if a new product or service is considerable different from other products that are already in-place at the company, it's better to explore those with spin-of companies, as dealing with two business models that are not related to each other might cause the company to lose its business focus. That perception is aligned with study of Chesbrough and Rosenbloom (2002), where the authors demonstrate how Xerox was able to continue the innovation process by using that approach.

Considering that, we were able to demonstrate that the framework described at figure 1, which was constructed based on the reviewed literature, was aligned with the business models changes that occurred at the studied company.

Although we believe that the objectives of this paper were achieved, it's important to point some limitations. First, our study is limited to a single company, which thus does not allow it to be generalized. However, following Stake (1995), the main objective of a single case study approach is not to achieve generalization, but to more in-depth explore the described scenario, which seems to be suitable for a business model research, since according to Teece (2010) business models are in-depth rooted with the company. Second, our study encompassed an elapsed time of only one year between the interviews. Future research can better explore that scenario by adding more companies to the study and also by increasing the elapsed time for the interviews, which can thus assist to better analyze the business model changes within the companies.

Although those limitations are present, we believe that our study was able to shed some light into the research field of business model changes and also in the relationship between the business model and the entrepreneur, thus providing a base line for new studies that aim to explore more in-depth that relationship and how it affects business model changes within companies.

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