

The influence of FinTech technologies in the field of online payments with regard to the business model of e-commerce businesses

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ABSTRACT,

Since the beginning of e-commerce in 1995, which “describes the process of buying, selling, transferring, serving, or exchanging products, services, or information via computer networks, including the Internet” (Abu-Shanab, 2015), it has globally grown from a standing start to €1.96 billion business-to-consumer and a €14.2 trillion business-to-business juggernaut, bringing about enormous change in business firms, markets, and consumer behaviour. It is generating thousands of new jobs in all fields from marketing to management, entrepreneurial studies, and information systems, and if one is working in an established business, chances are the firm’s e-commerce capabilities are important factors for its success (Laudon & Traver, 2016). But also FinTech, a new financial industry that applies technology to improve financial activities (Schueffel, 2016), is a rapid growing industry: according to an industry report, the value of investments in Fintech firms have grown by 75% in 2015 to USD 22.3 billion compared to the previous year (Skan, Dickerson, & Gagliardi, 2016). Logically, FinTech technologies also emerge for e-commerce businesses to optimize the payment process. Because of the importance of e-commerce in the current world and the growing impact of FinTech, and the absence of literature regarding the implications of fintech payment technologies on the business model of e-commerce companies, this paper examined what the implications are of various payment solutions to the business model of e-commerce businesses, where especially the payment part of the business model will be examined and an emphasis on the value proposition will be put. This examination was done by analysing the business model of Azerty, a webshop that sells IT-hardware. There was found that implications to the value proposition and business model are small: the technologies do not tend to drastically change the value that is created or the way how it is created, but to create extra value as an addition to the value that is already created. This is because ease of adoption and ease of implementation tend to be one of the most important factors that determine the use of the FinTech-technologies, although further research could build on this to give a more precise conclusion. The level of trust in an online payment system and the kind of webshop also seem to influence the implementation and adoption rate of the FinTech technologies. Finally, the investigated FinTech-technologies aim to broaden the Customer Segment, although this depends on the effective use of the FinTech-technologies.

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Keywords

FinTech, E-Commerce, Webshop, Business Model, Value Proposition, Online Payments

1. INTRODUCTION

The importance of webshops and the rapid growth of FinTech-technologies ensures that more webshops are using and taking the advantages of these technologies. Literature that gives an understanding of the effects of these FinTech-technologies on the value that is created and the way how it is created could help webshops to determine if such FinTech-technologies are beneficial for their webshops and whether it will cause big changes to the value-creation. Further could literature that determines the most important criteria of the adoption and use rate by webshops and clients of webshops help FinTech-technology developers in the field of online payments to determine what to take into account when developing these technologies. This research explores the implications on all business model elements of e-commerce businesses that adopt fintech payment solutions, to provide a better understanding of the consequences of these adoptions on the business model of e-commerce businesses.

1.1 Current Situation and Problem

The current situation of e-commerce is that webshops provide their clients with a convenient shopping experience from the comfort of their homes, enabling them to save time and effort required to satisfy their shopping needs. It also provides them with the ability to compare different products, reduce time and effort searching for products and prices, benefit from better availability across different times and geographic location, and some consumers find online shopping a way to save money on their purchases (Abu-Shanab, 2015).

A book about electronic e-commerce stated that 'the absence of ubiquitous, trustworthy, flexible and fail safe online payment solutions have become one of the most severe inhibitors of electronic commerce growth' (Langdon, Roghe, & Shaw, 2000). Since this is an old reference, we can state that the terms 'ubiquitous, trustworthy, and fail safe' are nowadays solved since the strong development of online payment systems. However, the term 'flexible' leaves much to be desired: on the internet, customers mostly have a couple of options to pay, where the most common are among others to pay the product at once or to pay after the customer has received the product. Further, providing consumers with safe and easy to use payment methods will apply as an influential factor to encourage them to shop online (Abu-Shanab, 2015). This is also because despite the many ways to make a payment, many consumers do not know how to use them, and always want the safest way to not lose money or the product (Castro, Santos, Sá, & Magalhães, 2019). Also, a payment system needs two sides to function; the payer and the payee, and a successful payment method is one that can bring as much of consumers and merchants together, which should be accepted and functional for both sides (Abu-Shanab, 2015).

1.2 Research Goal

Literature regarding the implications of FinTech-technologies in the field of online payments on the business model of webshops can provide an understanding for webshops in the effect of these technologies on the value creation and for the developers of these technologies in the important criteria for the adoption and use rate. This is why an analysis of the implications to the business model with an emphasis on the value proposition when adopting two FinTech-technologies in the field of online payments is conducted.

Considering the aforementioned statements, safe and easy-to-use payment methods apply as an influential factor to shop online and a payment system should be accepted and functional for both sides. Also has research verified that satisfaction of the

participants' with purchases and online means of payment increases when there are no problems associated with online shopping (Castro, Santos, Sá, & Magalhães, 2019). Considering the aforementioned statements, there is chosen to investigate two different FinTech-technologies that connect with these statements, since they both aim to optimize the online payment process and to perfect these statements: one increases the number of payment options with a unique way to pay products in installments, and one eases the integration of various payment gateways for webshops. To be more specific, the implications to the business model of e-commerce business Azerty will be investigated when adopting the FinTech technologies of Aplazame and MyChoice2Pay, two Spanish Fintech-companies that provide the aforementioned solutions for e-commerce companies. After this, an overall view on FinTech technologies in the field of e-commerce payments will be given, consisting of literature but especially the view of experts in the field of e-commerce payments and Fintech.

1.3 Research Question

The research question in this case study derived from the research goal as presented before is as followed:

What are the business model implications for e-commerce businesses integrating FinTech-technologies in the field of e-commerce payments and what are the most important implications of the various FinTech-technologies on the value proposition?

This question has led to three sub questions:

1.3.1 1st Sub Question

How is the business model of e-commerce businesses changed by the integration of the FinTech technologies in the field of online payments?

1.3.2 2nd Sub Question

How is the value proposition of e-commerce businesses changed by the integration of the FinTech technologies in the field of online payments?

1.3.3 3rd Sub Question

What are the similarities between the two investigated FinTech technologies considering the implications to the business model and value proposition?

1.4 Academic Relevance

Literature with regard to the combined field of webshops and FinTech-technologies focused on the implications of these technologies to the business model and value proposition of webshops can give an understanding about not only the FinTech-technologies themselves, but also about the effect on the value creation of webshops when adopting FinTech-technologies in the field of online payments. There can be built on the understanding that is found in this paper with new literature to give more precise conclusions about the influence on webshops of these FinTech-technologies in the field of online payments.

1.5 Practical Relevance

The findings of this paper benefit both webshops and developers of FinTech-technologies because it gives webshops an understanding in the effects of these FinTech-technologies in the value creation of webshops and it helps the developers of the FinTech-technologies to give an understanding in the most important criteria that the FinTech-technology should have to ensure the highest adoption rate is obtained. Further will webshops and the developers of FinTech-technologies in the field of online payments learn more about their value proposition.

2. THEORETICAL FRAMEWORK

In this section, the relevant theories that will be used are presented. These will be related to FinTech-technologies in the field of online payments and business models.

2.1 FinTech

As already stated in the abstract of this paper, FinTech is a new financial industry that applies technology to improve financial activities (Schueffel, 2016). This definition has been determined by Schueffel (2016) on the basis of a comprehensive literature review combined with a thorough semantic analysis. However, in this paper the focus is put on webshops, which ensures that the financial activities that FinTech tends to improve are aimed on online payment innovations.

2.2 Business Model

The concept of business model takes an important role in the research.

A paper by Ritter & Lettl (2018), which was put in a special section of 'Business Models and Business Model Innovation' by leading international journal "Long Range Planning", argues that "business-model research has struggled to develop a clear footprint in the strategic management field" and that "part of this struggle relates to the application of five different perspectives on the term "business model," which creates ambiguity about the conceptual boundaries of business models, the applied terminology, and the potential contributions of business model research to strategic management literature." They have explicitly distinguished among five perspectives ("business-model activities", "business-model logics", "business-model archetypes", "business-model elements", and "business-model alignment") and aligned them into one overarching, comprehensive framework, where it offers a foundation for consolidating business model research (Ritter & Lettl, 2018). However, the framework is not adopted here because it gives a detailed understanding of business models, since "there continues to be little agreement on an operating definition." (Ritter & Lettl, 2018). It does not provide the reader with a tool to compare different business models across different industries.

With the *Business Model Canvas* it is possible to compare different business models. It is the most widely-known tool used in relation to the business model and it is used to describe a firm's value proposition, infrastructure, customers, and finances (Osterwalder & Pigneur, 2010). The use of this tool is explained in the book "Business Model Generation" by Osterwalder and Pigneur (2010). Using the Business Model Canvas for the different cases gives the possibility to analyse and compare the business models.

2.3 Value Proposition

This paper also focuses especially on the value proposition by investigating the different dimensions of the value proposition of the investigated cases, and again a tool of Osterwalder & Pigneur will be used: the "Value Proposition Canvas", which is explained in their book "Value Proposition Design" (Osterwalder, Pigneur, Bernarda, & Smith, 2014). Although other tools could be used, this one gives a simple and accessible way of researching whether the value proposition of a company's business model correlates with the actual needs of the customers it wishes to serve. In the book "Business Model Generation" by Osterwalder and Pigneur (2010), the value proposition is a part of the business model and it is defined as that which "describes the bundle of products and services that create value for a specific customer segment" and clarifies it by stating that "it is the reason why customers turn to one company over another", and that "it solves a customer problem or satisfies a customer need" (Osterwalder & Pigneur, Business Model Generation, 2010).

The Value Proposition Canvas has two sides, namely the Customer Profile and the Value Map. In the previous mentioned book "Value Proposition Canvas", a short distinction between the two is given: With the Customer Profile you clarify your customer understanding. With the Value Map you describe how you intend to create value for that customer. You achieve Fit between the two when one meets another (Osterwalder, Pigneur, Bernarda, & Smith, 2014).

2.3.1 Customer Profile

The Customer Profile consists of the Customer Jobs, Customer Pains and Customer Gains.

Customer Jobs describe the things your customers are trying to get done in their work or in their life. A customer job could be the tasks they are trying to perform and complete, the problems they are trying to solve, or the needs they are trying to satisfy. There are three main types of customer jobs: *Functional jobs*, which is when your customer tries to *perform or complete a specific task or solve a specific problem, for example to eat healthy*; *Social jobs*, which is when your customers want to look good or gain power or status, for example to look trendy; and *personal/emotional jobs*, which is when your customers seek a specific emotional state, such as feeling good or secure. Customers also perform *supporting jobs* in the context of purchasing and consuming value either as consumers or as professional. This could be in the role of the buyer of value, the co-creator of value or the transferrer of value. It is important to consider *job context*, which says that the specific context in which customer jobs are performed may impose certain constraints or limitations. Also is it important to acknowledge *job importance*, since not all jobs have the same importance to the customer (Osterwalder, Pigneur, Bernarda, & Smith, 2014).

Customer Pains describe anything that annoys the customers before, during, and after trying to get a job done or simply prevents them from getting a job done. They also describe risks (potential bad outcomes), related to getting a job done badly or not at all. There are three types of customer pains and how severe customers find them: (1) Undesired outcomes, which are pains that are functional, social, emotional, or ancillary; (2) Obstacles, which are pains that prevent customers from even getting started with a job or that slow them down; and (3) Risks, which are pains that deal with what could go wrong and have negative consequences. Important to consider is the *pain severity*, which is about the level of the pain (e.g. extreme or moderate) (Osterwalder, Pigneur, Bernarda, & Smith, 2014).

Customer Gains describe the benefits and outcomes that customers want. Some are expected, required, or desired by customers, and some would surprise them. There are four types of customer gains: (1) Required Gains, which are gains which without a solution would not work; (2) Expected gains, which are relatively basic gains that we expect from a solution, even if it could work without them; (3) Desired Gains, which are gains that go beyond what we expect from a solution but what we would love to have if we could; and (4) Unexpected Gains, which are gains that go beyond customer expectations and desires and would not even come up with them if you would ask them. Important to consider is the *Gain Relevance*, which is about the level of the gain (e.g. essential or just nice to have) (Osterwalder, Pigneur, Bernarda, & Smith, 2014).

2.3.2 Value Map

The Value Map consists of the Products and Services, Pain Relievers and Gain Creators.

The Products and Services are simply a list of what the company offers to its customers. These products and/or services help the customers to complete their functional, social, and/or emotional

jobs or to satisfy their basic needs. They can also help customers perform the roles of the buyer, co0creator, and transferrer (Osterwalder, Pigneur, Bernarda, & Smith, 2014).

Pain Relievers describe how exactly the products and services of the company alleviate specific customer pains. They outline how a customer intends to reduce or even eliminate some of the things that annoy the customers before, during, or after they are trying to complete a job or that prevent them from doing so (Osterwalder, Pigneur, Bernarda, & Smith, 2014).

Gain Creators describe how the products and services of a company create customer gains. They outline how the company intends to produce outcomes and benefits that customers desire, expect, or would be surprised by (Osterwalder, Pigneur, Bernarda, & Smith, 2014).

For all three criteria it is important to consider the *relevance*, which is about the level of relevance of the products and services, pain relievers and gain creators to the value proposition (e.g. essential or merely nice to have) (Osterwalder, Pigneur, Bernarda, & Smith, 2014).

3. METHODOLOGY

In this section, the methods and techniques used to conduct the research are described. The research design and the empirical approach used are provided. Also, information about the research participants is provided, as well as how the data is collected.

3.1 Research Design

To investigate the changes in the business model of adopters of the FinTech technology, two FinTech-technologies are investigated. The two FinTech-technologies subject to the research comprise Azerty as the representative for e-commerce businesses and Aplazame and MyChoice2Pay as the representatives for FinTech-technologies in the field of e-commerce payments. In the next step, Azerty is compared to the other two FinTech-technology providers using a cross-case analysis of the aforementioned canvas, and also are the two FinTech-technologies providers compared to each other. After this, experts in the field of e-commerce, online payments, and FinTech are asked about the online payment system, to see what criteria are important to make the online payment process work, and to see what are limitations to the use of it. This helps in other to conclude on the business model and value proposition implications for e-commerce businesses, since it gives a view of where to look for when developing FinTech-technologies in the field of online payments. Finally, conclusions are drawn based on the investigated data of the companies and the experts.

3.2 Data Collection Methods

In order to gather the data of the providers of the two FinTech-technologies and of webshop Azerty, semi-structured interviews are conducted. The choice for a qualitative interview is based on the fact that it crosses out predefined answers to questions. To distinct between various types of qualitative interviews, the choice is made to focus on standardized open-ended interviews, which holds that the exact wording and succession of questions are determined in advance, and that all interviewees are asked the same questions in the same sequence (Finkbeiner, 2016). All semi-structured interviews, which will provide data about the cases' business model and value proposition, are lasting approximately 30 to 60 minutes and are recorded on tape and provided upon request. Interviews serving to validate and assess the findings last approximately 30 minutes each. For all semi-structured interviews holds that they are recorded and provided upon request.

According to Teddlie and Tashakkori (2009) interviews may also take place over the telephone and via the internet. One of the

experts has been interviewed through Skype (videochat), and three other experts have been provided with questions through e-mail. There is chosen for this kind of interview because of convenience for both parties.

3.3 Introduction to Case Companies

3.3.1 Azerty

For this research, the focus is on having an e-commerce company that fits as representative for all e-commerce companies. Since there are many different kinds of e-commerce companies, finding a representative was based on the ratio of good reviews, whether it has a well-functioning and good-looking website, and whether it sells normal, well-known products. Azerty meets all this criteria because it sells IT-hardware, scores a 9.1 (based on approximately 3000 reviews) on the well-known review website 'Trustpilot', and it has a well-maintained and fast-functioning website with a clear overview.

3.3.2 MyChoice2Pay

MyChoice2Pay is a FinTech company that offers one package with multiple solutions. Their main solution is a platform that enables customers (webshop owners) to integrate every desired payment gateway in the world with one single click. The company is chosen as a case study because it provides a unique FinTech technology with multiple benefits, both for customer as for the clients of the webshop. Not only do they provide the platform, but also do they provide customers with the ability to test different gateways to see which obtains the highest conversion rate, and they ease the process of complying with the PCI (a set of requirements that must be met to ensure payment gateways can be used on a website). Next to this, they provide the customer with a unique payment gateway called 'Divvy', which enables clients of webshop to split their payment with acquaintances (MyChoice2Pay, sd).

3.3.3 Aplazame

Aplazame (English: 'postpone me') is a FinTech company that sells a payment gateway to e-commerce businesses so they can pay in installments. The company is chosen as a case study because it provides a FinTech technology that fits the criteria, namely a payment gateway for e-commerce businesses, and because it differentiates itself by providing a service that is done by few companies nowadays. The technology is very easy to use by customers of e-commerce businesses: if they want to pay for the product they have chosen, they have the option to choose to pay with Aplazame. After they have chosen this option, the customer can choose in how many months it will pay the debt and at which day of every month the money can be written off. This is all done without the need for paperwork, the customers choose which card they want to use to pay, and they can add as many as they need. Aplazame also takes security very seriously: it uses the most modern standards to be sure that transactions are safe (Aplazame, sd).

4. FINDINGS

In this section, the findings from the semi-structured interviews are provided. These were conducted with I. Martínez of the marketing team of Aplazame, A. Puentes Luberta as the CEO of MyChoice2Pay and J. te Wierik as the CEO of Azerty.

The methods that are used to illustrate the findings are the business model canvas (Osterwalder & Pigneur, Business Model Generation, 2010) and the value proposition canvas (Osterwalder, Pigneur, Bernarda, & Smith, 2014). First, the findings on the value proposition and business model of the payment system of Azerty are given, to sketch the current situation of online payments. Next, the value proposition canvas

and business model canvas are illustrated for Aplazame and MyChoice2Pay.

In the following sections of the paper the terms ‘*payment gateway*’ and ‘*payment method*’ will be used, where it seems that they mean the same, but actually have a different definition.

A *payment gateway* makes it possible for customers to pay. Examples of payment gateways are PayPal, Stripe, iDeal, Aplazame, etcetera, which all offer different *payment methods* to pay with (Puentes, 2019).

A *payment method* is defined as the way of paying. Examples are with an eWallet (for example PayPal), with credit card (for example Stripe), with a bank account (for example iDeal), and in installments (for example Aplazame) (Puentes, 2019).

Important to understand is that webshops integrate *payment gateways* in order to provide their clients with different kinds of *payment methods*. For a webshop it is preferable that it has all kinds of payment methods, so every customer can pay in the way it prefers. However, it is also possible that clients of webshops prefer to use another payment gateway than the one that is offered by the webshop. For example, Aplazame and Paga+Tarde are both providers of a payment gateway that enable the client of the webshop to pay in installments (the payment method), but it could be that a client of a webshop prefers to use Aplazame over Paga+Tarde.

So there is talked about *payment gateways*, think for example about PayPal and iDeal, which are services that enable clients of webshops to pay. When there is talked about *payment methods*, think about the way of paying, for example with credit card, bank account or in installments (which are offered by payment gateways).

4.1 Current Situation of Online Payments at Webshops

4.1.1 Value Proposition Azerty

In the case of Azerty, the focus lies on two customer segments, which are private and business customers.

The main job that these customers have to perform is to make an online payment (te Wierik, 2019).

Pains where customers are dealing with is that the online payment process takes too much time or is too difficult, that the desired payment gateway or method is not available for use at the website, and administration costs, especially when they are shown at the end of the online payment process when customers had to go through multiple steps (te Wierik, 2019).

Table 1. Customer Profile Azerty

	CUSTOMER JOBS	PAINS	GAINS
1	Online payments	Online payment process takes too much time	Immediate help available when making the online payment
2		The desired payment gateway or method is not available for use at the website	Having every desired payment gateway and method available for use.
3		Administration costs	Option to pay in installments

Talking about customer gains, customers of Azerty expect at least that there can be paid at the website of Azerty and that the process is easy. Desired would be that every desired payment

gateway and method is available for use and that there would be immediately help available from an employee when making the online payment. An option to pay in installments is also desired, but for Azerty it depends on the costs (te Wierik, 2019).

Considering the counter side of the value proposition canvas, the online payment process of Azerty is on average as easy as those of competitors. Also does Azerty have multiple payment gateways and methods, and does it not charge administration costs for clients (te Wierik, 2019).

Table 2. Value Proposition Azerty

	PAIN RELIEVERS	GAIN CREATORS	PRODUCTS & SERVICES
1	Easy online payment process	Chat-box at online payment process which provides client with immediate help from employee	The online payment process
2	Multiple payment gateways and methods available for use	Azerty optimizes payment process to the wishes of her clients	
3	No administration costs	Option to pay on account (for business clients)	

The gain creators consist of an easy online payment process. Soon, there will also pop-up a chat box for customers that are doing the online payment but it takes them too long to finish: The website of Azerty will automatically react since it will think that the customer does not know how to finish the payment process. Further, if clients prefer to see anything changed at the online payment process, Azerty is willing to co-operate (as long as it stays beneficial for most of the clients). Moreover, for business clients there is the option to pay on account (te Wierik, 2019).

4.1.2 Business Model Azerty

In the previous section (4.1.1.) the Customer Segments and Value Proposition were defined.

The next building block is about channels. Although Azerty does not aim to ‘promote’ its online payment process, the most important channel where Azerty speaks about it is the website. The relationship Azerty has with its customers is based on self-

Table 3. Business Model Azerty

	CUSTOMER SEGMENTS	VALUE PROPOSITION	CHANNELS	CUSTOMER RELATIONSHIP	REVENUE STREAMS	KEY RESOURCES	KEY ACTIVITIES	KEY PARTNERS	COST STRUCTURE
1	Private Clients	See Table 1 & 2	Official Website	Self-Service (via the website)	Revenue of product	Payment Service Provider	Fixing problems (on website and customer problems)	Multisafepay (PSP)	Commission costs for payment service provider
2	Business Clients			Personal Assistance (by telephone or chat-box which will be available soon)		Website	Meeting payment service provider once a year	Website Developer	Transaction costs for provider of payment method
3						Accounting Program	Process refunds		Shipping costs
4							Sometimes adapt to wishes of the customer		

service and personal help. Azerty tries to provide the client with every help they need at the payment process itself, and customers can always call Azerty if they do not know how to proceed. Also, soon Azerty is going to launch a chat-box at the online payment process, that will pop-up if the online payment process takes too long: the system will react with popping-up the chat-box because it thinks that the client needs help with the online payment process (te Wierik, 2019).

Azerty has only one revenue stream that comes from the online payment process: the product itself. The shipping costs that Azerty receives have to be fully spent at sending the package to compensate for these costs, and it charges no administration costs (te Wierik, 2019).

The most important assets of Azerty to make the online payment process work consist of a payment service provider who

facilitates and helps webshops in the accepting of payments and also takes care of the payment gateways that the webshop desires (as long as they are available at the payment service provider), the website and an accounting program (te Wierik, 2019).

There are few activities that have to be done to make the online payment process work. Azerty only has to fix problems with the online payment process and problems that clients have, and once per year it has a meeting with the payment service provider. Further does it have to process refunds and sometimes it adapts the online payment system to the wishes of the client if there is room for improvement (te Wierik, 2019).

The key partners of Azerty with regard to the online payment process are payment service provider Multisafepay and their website developer (te Wierik, 2019).

The costs that Azerty incurs consist of the commission that is paid to its payment service provider and transaction costs for the provider of the payment gateway. Also do they make a loss at the shipping costs, since these are lower than the actual costs of the shipping (te Wierik, 2019).

4.2 Online Payments at Webshops When Using the Chosen Payment Solutions

4.2.1 Value Proposition MyChoice2Pay

In the case of MyChoice2Pay, the company focuses on webshops and any other platform where customers can pay online, like by an application or e-mail (Puentes, 2019). They also try to expand to physical companies. For this paper, only a focus will be placed on the online shops. Of all the online shops, there are no different customer segments: They are treated as one customer.

The main job that these customers have to perform is to integrate payment gateways (Puentes, 2019).

Table 4. Customer Profile MyChoice2Pay

	CUSTOMER JOBS	PAINS	GAINS
1	Integrate payment gateways	Individual integration of payment gateways	Lower costs of payment gateways
2			Ability to test payment gateways

Pains where customers are dealing with are that when they want to integrate payment gateways, they have to integrate them individually, which costs much time (Puentes, 2019).

Talking about customer gains, payment gateways that are cheap to use would be perceived as a gain. This also applies to the option to test various payment gateways easily (Puentes, 2019).

Table 5. Value Proposition MyChoice2Pay

	PAIN RELIEVERS	GAIN CREATORS	PRODUCTS & SERVICES
1	Platform where customers can easily integrate every desired payment gateway with one click	No loss of payment gateway accounts when switching in future to competitor	MyChoice2Pay
2	Easily delete unwanted payment gateways	Stronger negotiation position for commission	Divvy
3		Testing payment gateways and checkout pages on conversion rate	
4		Different integration forms of checkout process	
5		Split payments (Divvy)	
6		Simplified compliance to PCI	

be). This reduces time of the integration and deleting of payment gateways since they no longer have to be integrated individually. Further, if another payment gateway has lowered its commission percentage, or you have problems with the gateway, you can easily switch to another one (Puentes, 2019).

The easy integration and deleting of payment gateways also strengthens the negotiation position of webshops with regard to

commission costs, since they do not to some extent depend on a payment gateway (Puentes, 2019).

Moreover, when a webshop uses a payment service provider with a card processor (like Adyen), it ensures that a webshop does not need an account in all different payment gateways that it uses: if the webshop wants to use a payment gateway like Klarna, it has an account in Klarna through Adyen. So if they decide to delete Adyen and go to another payment service provider (like MyChoice2Pay) they lose this account in Klarna and of all other payment gateways that they use. MyChoice2Pay ensures that you can choose the payment gateways that you want and can make an account in all these different payment gateways, so you do not lose the accounts when you switch to a competitor (Puentes, 2019).

Also does MyChoice2Pay focus on providing the webshop with financial data. The platform makes it able to test various payment gateways and the webshop can see what payment gateway performs best, based on for example customer location or customer profile, and offer one payment gateway or other payment gateway based on the customer. Also can it test payment gateways with a similar payment method, like Aplazame and Paga+Tarde. This ensures that the payment gateways that obtain the highest conversion rates are used (Puentes, 2019).

In addition, soon it will be possible to test different layouts of the checkout page. You can test what payment gateway is the best to show first, where to put the 'add to card' button or a photo that you want to show, etcetera. This can be done by for example providing 50% of the customers with a checkout page where the desired payment gateway to test is shown first, and to the other 50% of the customers a checkout page where this payment gateway is shown second. Financial data will show what checkout page ensures the highest conversion rate is obtained (Puentes, 2019).

Additionally can the webshop owner decide where the checkout process take place with different integration forms: At the website of the webshop itself ('Custom'), which ensures the process stays personalised with your brand (colour, sizes, etc.), with an iFrame at the time of payment ('iFrame'), or the customer can be directed to MyChoice2Pay at the time of payment ('Redirect') (Puentes, 2019).

Furthermore is it through MyChoice2Pay possible to use payment gateway 'Divvy', which allows clients of webshops to split online payments and subscriptions with acquaintances (Puentes, 2019).

Finally does MyChoice2Pay simplify the PCI, which is the set of requirements that must be met to ensure card data is secured when processed, stored and/or transmitted. Without MyChoice2Pay, 331 requirements have to be met. With MyChoice2Pay, 135 requirements have to be met for integration form 'Custom' and 22 for 'Redirect' or 'iFrame' (Puentes, 2019).

4.2.2 Business Model MyChoice2Pay

In section 4.2.1.2. the Customer Segments and Value Proposition were defined.

The next building block is about channels. The most important channel is the website, where all the information about the payment solution is provided and a consult can be arranged with the consult button. Also Slack is used, which is a sort of WhatsApp for businesses, and Skype is used for video-chatting with customers (Puentes, 2019).

The type of relationship that MyChoice2Pay has with customers is based on personal assistance. During the process of integrating MyChoice2Pay, the help that is needed is provided (Puentes, 2019).

The most important revenue stream of MyChoice2Pay is a fixed rate for each transaction. This is a maximum of 10 cents per

Table 6. Business Model MyChoice2Pay

	CUSTOMER SEGMENTS	VALUE PROPOSITION	CHANNELS	CUSTOMER RELATIONSHIPS	REVENUE STREAMS	KEY RESOURCES	KEY ACTIVITIES	KEY PARTNERS	COST STRUCTURE
1	Webshops	See previous section	Official website	Personal assistance	Fixed rate for each transaction	Official website	Maintaining good relationship with payment gateways	Payment gateways	Server costs
2			Slack & Skype			Software	Developing the product	Paymatico	Human resources
3						Human resources	Fix issues of customers	AWS Amazon	Building costs
4							Marketing the product		
5							Updating the blog and website		

transaction. The exact rate depends on the amount of transactions that the e-commerce company has approximately per month. (Puentes, 2019).

The most important resources to make the business model work consist of the official website, the software and human resources (Puentes, 2019).

One of the most important key activities that MyChoice2Pay conducts to make the business model work is maintaining a relationship with payment gateways: if they change anything, MyChoice2Pay also have to do this, so they need to keep in touch with them. Further, they constantly develop the product, and fix issues that happen by customers that use the payment solutions. Also marketing the payment solution and updating the blog and website make part of the key activities of MyChoice2Pay (Puentes, 2019).

The most important partners of MyChoice2Pay are the payment gateways, since their whole product is based on them (Puentes, 2019). Further do they offer Paymatico as their own payment gateway, but they do not force clients to use it (Puentes, 2019). Also do they have AWS Amazon as a partner, since they use their servers to offer the solution of MyChoice2Pay.

The costs that MyChoice2Pay incur consist of the costs to use the server, human resources, and the building costs (Puentes, 2019).

4.2.2.1 Value Proposition Aplazame

Table 7. Customer Profile Aplazame

	CUSTOMER JOBS	PAINS	GAINS
1	Integrate a 'pay-in-installments' payment method	Most service providers do not have a 'pay-in-installments' payment method	A 'pay-in-installments' payment method where the period of repayment and date of monthly debit can be chosen

In the case of Aplazame, there are two customers where they focus on: online shops (the online payment processes on customers' websites) and offline shops (the payment process in real-life) (Martínez, 2019). For this paper, only a focus will be placed on the online shops. Of all the online shops, there are no different customer segments: They are treated as one customer.

The main job that these customers have to perform is to integrate a pay-in-installments payment gateway.

Pains where customers are dealing with are that there is no payment gateway available at most of the payment service providers which provides the customer with the option to integrate a payment gateway that enables clients of the webshops to pay in installments. This costs the webshop clients that do not

have the money at the moment but are still willing to pay the product over an extended period, or clients that do not want to spend a big amount of money at once (Martínez, 2019).

Talking about customer gains, a pay-in-installments payment gateway where the user can determine the length of the repayment period would be desired. Also could existent clients be more satisfied with an additional payment option.

Table 8. Value Proposition Aplazame

	PAIN RELIEVERS	GAIN CREATORS	PRODUCTS & SERVICES
1	Option for customers to pay in installments	Option to decide in how many months the product is paid (up to 36) and at what date of the month the debit takes place	Aplazame
2		Clients of Aplazame receive sum immediately	
3		Choice to lower interest rate for customers (as promotion strategy)	

Aplazame aims to relieve pains and create gains with one product, which is called 'Aplazame' (Martínez, 2019).

Aplazame relieves pains by providing customers with a payment gateway which their clients can use to pay in installments. This ensures that clients that do not have the money at the moment or do not want to spend a huge amount at once can pay in an extended period, which ensures that the range of clients is expanded (Martínez, 2019).

The gain creators consist of the option for customers of the e-commerce company to decide in how many months they are going to pay the product (up to 36 months) and at what date of the month the debit of the bank account will take place. (Most) competitors of Aplazame do not provide their clients with this length of period to pay and the option to decide at what date of the month the debit takes place, so these options can be regarded as gain creators (Martínez, 2019). Further, the whole price of the product is subsidized by Aplazame to the e-commerce company, so they immediately have the money (Martínez, 2019). In addition, e-commerce companies have the option to lower the interest rate for their customers and to take over the remaining costs, for example as a promotion or sales strategy or to build better relationships with clients (Martínez, 2019).

4.2.2.2 Business Model Aplazame

In section 4.2.1.3. the Customer Segments and Value Proposition were defined.

The next building block is about channels. The most important channel is the website of Aplazame. Other channels are different kinds of events with media, but also big events with existing and potential customers, where the existing customers explain to the potential customers the benefits of using the product of Aplazame. Also, interviews with existing customers and people from Aplazame itself are conducted which are shown at their blog. The most important social media platform is Twitter, because of the easiness of conversation. Here, the focus is more put on B2B, because there are many shops on Twitter. Facebook focusses more on B2C. LinkedIn is used mostly for job offers or for events (Martínez, 2019).

Table 9. Business Model Aplazame

	CUSTOMER SEGMENTS	VALUE PROPOSITION	CHANNELS	CUSTOMER RELATIONSHIPS	REVENUE STREAMS	KEY RESOURCES	KEY ACTIVITIES	KEY PARTNERS	COST STRUCTURE
1	Webshops	See Table 7 & 8	Official Website	Personal Assistance	Interest rate (paid by buyer of product)	Software	Launching new features	Ecercit	Human Resources
2			Networking Events	Self-Service (via the website)	Commission for every transaction (paid by customer of Aplazame)	Data (algorithms)	Updating the algorithms	Lleidanet	Office of Aplazame
3			Blog			Official Website	Informing customers	Avivavoice	Lost money due to no repay of customer
4			Social Media (Twitter, Facebook & LinkedIn)			Human Resources			
5						Office of Aplazame			

The relationship Aplazame has with its customers is based on personal assistance: one or multiple employees of Aplazame help with the integration of the product on the website of the e-commerce company. In case of problems, Aplazame can always be contacted by telephone and e-mail. There is also the option for self-service, since the website of Aplazame has made a platform where every information that is needed to optimize the use of the product can be found (Martínez, 2019).

Aplazame has two revenue streams: the first one is the interest that customers of e-commerce companies pay over the price of the product. Customers pay these because they rent money of Aplazame. The interest rate that Aplazame charges is 24,5% APR over the product price. Webshops can decide by themselves whether they take over some of the interest costs of the customer. The second revenue stream is the commission that stores pay to use the service of Aplazame. The percentage of interest ranges from 0.5% to 1.5% and is based on the size of the store: the bigger, the lower the percentage of commission, and vice versa. This is because big companies have proved that they have constant revenue streams and thus Aplazame's chance of receiving the money that they get the money back that they have lent is higher. The commission can get lower if the experience with the customer is great, or the company grows (Martínez, 2019).

The most important assets of Aplazame to make the business model work consist among other things of the software, the website, human resources and the building where Aplazame's employees work, but also the data that they keep: Aplazame works with algorithms that are learning at every moment and from every credit. It are formulas that the data team proposes based on different variables. The decision engine of Aplazame is based on these algorithms, and based on the experience acquired with the credits that are granted, they are able to "learn" to know which application is good and can be granted, and which application is not good and should be refused (for example, strange behaviour on the web in which the user adds a product to

his shopping cart, then removes it, then adds two, then adds a name in the credit application, then changes it to another, and then adds card information that is not his, etcetera). With all this, the algorithms learn and are able to give credit in a much more effective way. which means that in one year they are probably better than now (Martínez, 2019).

Key activities of Aplazame are launching new features every two months, updating the algorithms, and continuing to inform customers, for example for new features (Martínez, 2019).

The key partners of Aplazame are Ecercit, LleinaNet and Avivavoice. All three companies help signing the contract between Aplazame and its customer, by sending to the customer the contract with the terms and an SMS with a code that is needed

in the application process. Further there are no key partners, since Aplazame does almost everything 'in house' (Martínez, 2019).

The costs that Aplazame incur consist of the payment of the human resources, the building, the

things that are needed in the building, and some loss of money which is due to e-commerce companies or customers of the e-commerce companies that do not repay the money that they have lent (Martínez, 2019).

5. ANALYSIS

This section aims at gathering the implications for webshops resulting from the integration of the two investigated payment solutions. First, the implications to the value proposition of Azerty will be explained. After this, the implications to the business model will be explained. Finally, the two FinTech technologies will be compared to each other.

5.1 Implications to the Value Proposition...

5.1.1 ...when adopting the FinTech-technology of MyChoice2Pay

Table 10. Comparison of Customer Profiles

CUSTOMER JOBS		PAINS		GAINS	
	Azerty	MyChoice2Pay	MyChoice2Pay	Azerty	MyChoice2Pay
1	Online payments	Integrate payment gateways	Online payment process takes too much time	Individual integration of payment gateways	Immediate help available when making the online payment
2			The desired payment gateway or method is not available for use at the website	Having every desired payment gateway and method available for use	Ability to test payment gateways
3			Administration costs	Option to pay in installments	

First of all, the payment experience of the client of the webshop improves. Not only can the best payment gateways be tested, but also the best checkout pages (based on conversion rate). In addition to the choice for the webshop to decide what integration form is taken (Custom, iFrame or Redirect), the webshop can

determine what layout of the checkout page will generate the highest conversion rate.

Further could lower commission rates, as a result of a stronger

Table 11. Comparison of Value Propositions

Azerty & MyChoice2Pay

1	Easy online payment process	Platform where customers can easily integrate every desired payment gateway with one click	Chat-box at online payment process which provides client with immediate help from employee	No loss of payment gateway accounts when switching in future to competitor	The online payment process itself (no name)
2	Multiple payment gateways and methods available for use	Easily delete unwanted payment gateways	Azerty optimizes payment process to the wishes of her clients	Stronger negotiation position for commission	
3	No administration costs		Option to pay on account (for business clients)	Testing payment gateways and checkout pages on conversion rate	MyChoice2Pay
4				Different integration forms of checkout process	Divvy
5				Split payments (Divvy)	
6				Simplified compliance to PCI	

negotiation position, be converted to the deleting of administration costs, or maybe even lower product prices, to increase the value proposition of the webshop.

Another implication is a payment gateway that enables clients of the webshop to split their payment costs or subscriptions with acquaintances. This extra payment method adapts to the needs of the client, who maybe prefers to pay in this way, and value creation with regard to providing clients with payment methods is extended to the maximum.

5.1.2 ...when adopting the FinTech-technology of Aplazame

method to their disposal is limited. It also creates value for existing clients, since it enables them to buy more products, something that previously perhaps was not possible.

Table 13. Comparison of Value Propositions

Azerty & Aplazame

		PAIN RELIEVERS	GAIN CREATORS		PRODUCTS & SERVICES
	Azerty	Aplazame	Azerty	Aplazame	Azerty
1	Easy online payment process	Option for customers to pay in installments	Chat-box at online payment process which provides client with immediate help from employee	Option to decide in how many months the product is paid (up to 36) and at what date of the month the debit takes place	The online payment process itself (no name)
2	Multiple payment gateways and methods available for use		Azerty optimizes payment process to the wishes of her clients	Clients of Aplazame receive sum immediately	
3	No administration costs		Option to pay on account (for business clients)	Choice to lower interest rate for customers (as promotion strategy)	

Further are these existing clients provided with another payment option, which could increase the average level of satisfaction they have at the specific webshop.

Moreover, it provides webshops with a new promotion strategy, since Aplazame enables them to lower the interest rate for their clients (although, the webshop has to pay the remaining interest costs).

5.2 Implications to the Business Model...

5.2.1 ...when adopting the FinTech-technology of MyChoice2Pay

Looking into *Customer Segments* in the case of Azerty, the

Table 14. Comparison of Business Models

Azerty & MyChoice2Pay

		CUSTOMER SEGMENTS		CHANNELS		CUSTOMER RELATIONSHIPS		REVENUE STREAMS		KEY RESOURCES		KEY ACTIVITIES		KEY PARTNERS		COST STRUCTURE
1	Azerty	MyChoice2Pay	Azerty	MyChoice2Pay	Azerty	MyChoice2Pay	Azerty	MyChoice2Pay	Azerty	MyChoice2Pay	Azerty	MyChoice2Pay	Azerty	MyChoice2Pay	Azerty	MyChoice2Pay
	Private Clients	Webshops	Official Website	Official Website	Self-Service (via the website)	Personal Assistance	Revenue of product	Fixed rate for each transaction	Payment Service Provider	Official Website	Fixing problems (on website and customer problems)	Maintaining good relationship with payment gateways	Multisafepay (PSP)	Payment gateways	Commission costs for payment service provider	Server costs
2	Business Clients			Slack & Skype	Personal Assistance (by telephone or chat-box which will be available soon)				Website	Software	Meeting payment service provider once a year	Developing the product	Website developer	Paymatico	Transaction costs for provider of payment method	Human resources
3									Accounting Program	Human Resources	Process refunds	Fix issues of customers		AWS Amazon	Shipping costs	
4											Sometimes adapt to wishes of the customer	Marketing the product				
5												Updating the blog and website				

Aplazame does not aim to provide customers with a frequency of payment gateways, but all of their effort is put in one payment gateway. Their product and solution provides customers with the

Table 12. Comparison of Customer Profiles

Azerty & Aplazame

	CUSTOMER JOBS		PAINS		GAINS
	Azerty	Aplazame	Azerty	Aplazame	Azerty
1	Online payments	Integrate a 'pay-in-installments' payment method	Online payment process takes too much time	Most service providers do not have a 'pay-in-installments' payment method	Immediate help available when making the online payment
2			The desired payment gateway or method is not available for use at the website		A 'pay-in-installments' payment method where the period of repayment and date of monthly debit can be chosen
3			Administration costs		Having every desired payment gateway and method available for use

option to provide their clients with a payment method with which they can pay product in installments, up to 36 months. The implication to the value proposition is that it creates value to new clients that previously could not pay the product price at once or were not willing to do this. In the market of a specific webshop, it could lead to a customer shift to the webshop that uses Aplazame since the number of webshops that has such a payment

customer segments are potentially broadened to all kinds of payment method users due to its main technological solution, depending on the payment gateways that are actually integrated by the webshop.

At the *Key Resources* is the payment service provider replaced by MyChoice2Pay: the solution and services of MyChoice2Pay take over the tasks of the previous payment service provider since the payment gateways that are needed to make online payments possible at the website can be integrated.

Another implication is to the *Key Activities*. The solution has enables the webshop to test various payment gateways and checkout pages based on conversion rates, which was before barely possible.

Also can the best payment gateways and the best performing checkout page be chosen based on conversion rate, which does not change something at the *Revenue Streams* but increases the number of payments and thus increases the total revenue of the webshop.

Further does Azerty now has MyChoice2Pay as *Key Partner*, who is also able to carry the negotiations for the commissions. Initially, Azerty was responsible for this process. Now a third

party which is specialized in payment gateways and commissions takes care of this, and Azerty can focus on other things.

Moreover, with regard to the *Cost Structure*, transaction costs for the provider of the payment gateway can be lowered with the stronger negotiation position.

5.2.2 ...when adopting the FinTech-technology of Aplazame

MyChoice2Pay focuses more on how the value is created, with solutions that lower commissions, make complying to the regulation process easier, and simplifies the integration of payment gateways. On the other hand, Aplazame focuses more on creating direct value for the client of the webshop, and thus improving the value that a webshop creates.

Secondly, the solutions are based on easy adoption and implementation. Webshops do not like the technical part in the

**Table 15. Comparison of Business Models
Azerty & Aplazame**

	CUSTOMER SEGMENTS		CHANNELS		CUSTOMER RELATIONSHIPS		REVENUE STREAMS		KEY RESOURCES		KEY ACTIVITIES		KEY PARTNERS		COST STRUCTURE	
1	Azerty Private Clients	Aplazame Webshops	Azerty Official Website	Aplazame Official website	Azerty Self-Service (via the website)	Aplazame Personal assistance	Azerty Revenue of product	Aplazame Interest rate (paid by buyer of product)	Azerty Payment Service Provider	Aplazame Software	Azerty Fixing problems (on website and customer problems)	Aplazame Launching new features	Azerty Multisafepay (PSP)	Aplazame Ecertic	Azerty Commission costs for payment service provider	Aplazame Human resources
2	Business Clients			Networking events	Personal Assistance (by telephone or chat-box which will be available soon)	Self-service (via the website)	Commission for every transaction paid by customer of Aplazame)		Website	Data (algorithms)	Meeting payment service provider once a year	Updating the algorithms	Website developer	LleinaNet	Transaction costs for provider of payment method	Office of Aplazame
3				Blog					Accounting Program	Official website	Process refunds	Informing customers	AvivaVoice		Shipping costs	Lost money due to no repay of customer
4				Social media (Twitter, Facebook & Linkedin)					Human resources		Sometimes adapt to wishes of the customer	Marketing the product				
5									Office of Aplazame		Updating the blog and website					

First of all, the *Customer Segment* is broadened to all customers that do not have the money at the moment to pay the product or are not willing to pay a big amount of money at once, but who are willing to pay these in installments. The higher the average product prices are, the more potential there is for the broadening of the customer segment, since this increases the chance that the customer is not able or not willing to pay the product price at once. For a company like Azerty, who works with relatively high product prices, this potential is thus on average higher than for companies with relatively lower product prices.

Also does Azerty get Aplazame as new *Key Partner*. Initially, the payment gateways were arranged by the payment service provider, who took care of the payment gateways. Using Aplazame requires having a partnership with them, but the use of the payment gateway that they provide is automated.

Another implication is to the *Cost Structure*. The use of Aplazame requires that commission costs for every transaction should be paid.

Normally there would also be an implication to the *Revenue Streams*, since paying in installments would ensure that Azerty would not receive the money right away for its products, but divided over periods. This would shift the leverage from Azerty to the customer, since the customer already receives the product without having fully paid for it. This could lead to non-payment and thus much waste of time to reminders. Aplazame has solved this problem by instantly paying the webshop and handling the risk of non-payment.

5.3 Comparing the two FinTech technologies from a business model perspective

Considering the two investigated FinTech technologies and their implications to the business model and value proposition, there was found one major difference and one major similarity.

First of all, they are not specifically focused on improving the value that a webshop creates (value proposition) or how it creates the value (business model) with its payment system.

back-end and clients of webshops think that ease and being able to pay quickly are important for an online payment process. This means that adopting and using the FinTech technologies should be as easy as possible, and this is reflected in (1) the business model implications, since there are few *changes* and more additions or improvements to the business model, which ensures that how the value is created with the online payment system stays more or less the same and thus ensures that there are no big adjustments, and (2) in the value proposition implications, since value is created by making the process as easy as possible for both the webshop as the clients of the webshop.

6. EXPERTS' VIEWS ON ONLINE PAYMENTS: IMPORTANT CRITERIA AND LIMITATIONS

In this section, an overall view on online payments will be given by experts, to see what criteria are important to make the online payment process work, and to see what are limitations to the use of it. This gives a view of where to look for when developing FinTech technologies in the field of online payments.

The experts are D. Yermack (professor of finance at the NYU Stern School of Business, New York University and Adjunct Professor of Law at NYU Law School), J. Lauwers (channel manager at Ingenico ePayments), P. Stobbia (experienced consultant with a demonstrated history of working in E-Commerce, nowadays working as independent consultant) and B. Voermans (Payments and FinTech specialist, working as Payment Specialist at Paymentdeck Consultancy). D. Yermack, J. Lauwers and P. Stobbia have been provided with questions through e-mail, and B. Voermans has been interviewed through Skype (videochat).

6.1 What are the most important factors to make the online payment process work?

Abu-Shanab (2015) investigated the factors influencing the intention to buy from online stores and used the Technology Acceptance Model (TAM) of Fred Davis, which predicts users motivations and drivers to adopt different technologies and systems. User motivation is affected by three factors: perceived usefulness (PU), perceived ease of use (PEOU), and attitude

towards the technology, where the latter has not proved its validity for online services, but the first two were found suitable to be applied on the intention to buy online. In the context of online shopping, perceived usefulness (PU) relates to the expected benefits a customer will gain by shopping online, while perceived ease of use (PEOU) is the expected usability of the online shopping experience. The results of the research indicated that PEOU and PU were both significant factors in predicting the 'intention to buy' from online shopping sites with varying significance degree: they were significant at the 0.001 level (Abu-Shanab, 2015). Especially the outcome of PEOU is in line with the implications of this study, that also came down to the fact that ease is one of the, if not the most important factor of adopting FinTech technologies, both for the webshop as for the client of the webshop. For example, Yermack (2019) said that integrating an online payment system is very easily done, since it is all a matter of establishing an Internet connection, downloading the proper software and registering for an account (Yermack, 2019). Also Lauwers (2019) stated that the more easy it is to integrate for example a payment solution, the better, and it is already for many years a trend that this is playing a more important role in the choice for a payment system. As an example he stated that a webshop can integrate almost every desired payment gateway, but payment service providers like Ingenico and Adyen were created from the need that the webshop only has to integrate one (payment) platform in order to be able to use all known payment gateways. This is of course also cheaper than when they were all integrated individually and with all different kinds of contracts (Lauwers, 2019). Stobbia (2019) complements this statement by stating that it is important that a website is easy to use, but most importantly that it is safe and secure (Stobbia, 2019).

6.2 What are limitations to the use of online payment technology?

Te Wierik (2019), CEO of Azerty, was asked whether he would integrate one of the investigated FinTech technologies. Although the two solutions were desired, he stated that the costs of using the solutions are the biggest factor deciding whether it would be used. If the payment gateway is more expensive than the ones he is already offering, and many already existing clients shift to using this payment gateway, then he could also lose money (te Wierik, 2019). Further, some businesses prefer to carry out illegal activities by operating entirely or mostly in cash as a way of evading sales taxes. This could be the single largest barrier to the spread of electronic payment technology (Yermack, 2019).

Also, when consumers have never heard of the solution, it could be a barrier to use it. Lauwers (2019) has never heard of the investigated solutions in this paper while he is working for 16 years in the business of e-commerce and payment solutions, so the chance that consumers do not know of these as well is high (Lauwers, 2019). This is of course influenced by the fact that these are Spanish companies, but indicates that if it is an unknown solution in Spain or regions of Spain, it could influence the adoption rate, which is probably influenced by the fact that the consumers know that they can trust that payment gateway. A paper which investigated customer's perceptions of security and trust in e-payment systems found that consumers' perceived trust has a positive impact on the use of the e-payment system (Kim, Tao, Shin, & Kim, 2010), which corresponds to this assumption.

Moreover, with regard to payment gateways, Lauwers (2019) was asked why webshops do not offer all payment gateways that are available. He stated that it should remain clear to the webshop and the customer of the webshop. Further, not all payment gateways do have an added value and there are a lot of payment gateways that are similar. When a webshop is offering iDEAL, it

makes no sense to offer another payment gateway where one can pay through its bank. A webshop only offers payment gateways that matter, since it is not *necessarily* the case that a webshop receives more payments when it offers more payment gateways (Lauwers, 2019).

7. CONCLUSION

First of all, it is impossible to draw one or more conclusions for all FinTech technologies in the field of online payments: these vary from one type to the other, since they all create different values. The conclusions are based on the findings of the investigation of the two FinTech technologies, which were focused on creating value with online payment gateways and methods, and on the expert interviews. To give a broad insight with regard to FinTech technologies in the field of online payments, multiple conclusions are drawn.

Based on the findings of this paper, the first conclusion that can be drawn is based on the comparison of the two FinTech technologies. Aplazame focuses *more* on creating value for the client of the webshop (changes in the value proposition), while MyChoice2Pay focuses *more* on creating value for the webshop (changes in the business model). Although they both change some things at the business model and value proposition of webshops, Aplazame's biggest implications are to the value proposition, since it tries to create value for the client of the webshop by providing them with a unique payment method. MyChoice2Pay's biggest implications are to the business model since its solution is for the largest part aimed on helping webshops with integrating payment gateways and developing the most effective checkout page. This means that FinTech technologies in the field of online payments do not necessarily focus on either changing the business model or changing the value proposition, but of course it could be possible that the focus seems to lie significantly more on one of the two when examining multiple technologies.

Second, the implications of the two FinTech technologies to the business model and value proposition are small. They do not tend to make big changes in the way value is created, and the extent to which the value that webshops create with the online payment system for its clients is increased is limited: considering the two investigated FinTech technologies, the extra value is mostly an addition to the value that already was created, instead of actually changing the value or one of the ways how the value is created.

The third conclusion also descends from the comparison of the two FinTech technologies. The ease of the process, both for the webshop as for the client, creates much value. No matter how good the FinTech technologies are, if they are hard to use, they will be less used by both webshops and clients of webshops, which is definitely not what providers want, since their revenue depends on the use of their solution. The paper which investigated customer's perceptions of security and trust in e-payment systems matches with this statement since it says that "complex procedures, such as fussy authentication and log-in procedures, erode consumers' convenience in using certain e-payment systems", and that "the inconvenience consumers experience in the transaction procedures might degrade consumers' valuation of the security and the trustworthiness of the e-payment system", while they found that perceived security is positively related to consumers' perceived trust and e-payment system use (Kim, Tao, Shin, & Kim, 2010).

The end of the third conclusion heralds the fourth conclusion: the level of trust in the e-payment system influences the use of it. This conclusion can be drawn on the basis of the expertise of Lauwers (2019), who states that not the number of payment gateways is important for a webshop, but the number of *relevant* payment gateways, since the consumer mostly uses payment

gateways that he knows (Lauwers, 2019). This is probably due to the trust that the consumer has in payment gateways that it has used before, since the consumer knows that he can trust these payment gateways. This conclusion also aligns with the theory in the introduction, where among others was stated that many consumers do not know how to use them, despite the many ways to make a payment, and always want the safest way to not lose money or the product (Castro, Santos, Sá, & Magalhães, 2019). Further was stated in the introduction that providing consumers with safe and easy to use payment methods will apply as an influential factor to encourage them to shop online (Abu-Shanab, 2015), which thus also strengthens the third conclusion since it mentions the importance of ease. Finally, also Stobbia (2019) stated that the most important criterium for a website, which includes the e-payment system, is that it is safe and secure.

Fifth, the extent to which these FinTech technologies create value will vary from webshop to webshop. Considering the investigated FinTech technologies in this paper, a webshop that offers products in all kinds of countries over the world will benefit more from a solution that enables the webshop to integrate every desired payment gateway than a webshop that focuses on customers locally. Also, a webshop that has on average higher product prices than other webshops will benefit more from a payment gateway that enables clients of a webshop to pay in installments than a webshop with on average low product prices, since then the chance is higher that a customer cannot or is not willing to pay the product price at once.

Sixth, the FinTech technologies in this paper aim to broaden the *Customer Segments*, although there should be stated that it is not necessarily the case that a webshop receives more payments when it offers more payment gateways: as Lauwers (2019) stated, when offering payment gateways it is all about offering relevant payment gateways (Lauwers, 2019), and further could it be that existing clients just switch from a previous used payment gateway to the new one, which does not result in new clients (te Wierik, 2019).

FinTech technologies in the field of online payments tend to produce small but (potentially) critical implications to the business model and value proposition, with ease and safety as the most important criteria. For every webshop the value that is created with the FinTech technologies varies, where it seems that they tend to broaden the customer segment or improve ease of use (although further research should build on these conclusions).

7.1 Theoretical Implications

As an outcome of this study, the academic field obtains a perspective on how FinTech-technologies in the field of online payments influence the online payment systems of webshops. This study has focused on FinTech technologies that focus on creating value with online payment gateways and methods. This contribution is relevant considering the absence of literature with regard to FinTech-technologies in the field of online payments and the combination of FinTech-technologies and business models. Also does the academic field obtain an understanding of the value creation of FinTech-technologies in the field of online payments due to the emphasis that has been put on the value proposition, and also will it have a better understanding of important criteria that make the online payment system a success, both in the perspective of the webshop owner as the provider of (FinTech-)technologies to webshop owners.

Literature with regard to the combined field of webshops and FinTech-technologies focused on the implications of these technologies to the business model and value proposition of webshops can give an understanding about not only the FinTech-technologies themselves, but also about the effect on the value

creation of webshops when adopting FinTech-technologies in the field of online payments. There can be built on the understanding that is found in this paper with new literature to give more precise conclusions about the influence on webshops of these FinTech-technologies in the field of online payments.

7.2 Practical Implications

First of all, the results of this paper give an indication to FinTech technology providers in the field of online payments where to aim for when creating value, since *Pains* and *Gains* clearly describe the gap where value can be created and examples are given of FinTech technologies and their value creation, where can be learned from. Further will potential FinTech technology users that doubt the value creation or the ease of adoption and implementation be provided with an overview of the implications to their business model and value proposition, which gives them a better overview and can help them in making the decision.

8. LIMITATIONS

Examining limitations of this study, it is hard to draw a conclusion for all FinTech-technologies in the field of online payments based on investigating a few. There are too many different FinTech technologies, which all will influence the value proposition and business model differently. There is tried to deal with this problem by first of all focusing on a specific section of FinTech technologies, namely those that focus on integrating and using online payment gateways and methods, and secondly by investigating two online FinTech technologies rather than one. Another limitation is that there could be business model or value proposition factors that are missed to mention by one or more of the interviewed experts, which could lead to missing data, which in its turn could lead to missing implications. Finally, this paper has worked with three case studies, where perhaps more could lead to stronger conclusions, although has to be stated that the choice for 'just' three case studies has led to the chance to thoroughly investigate all cases, what also can lead to more specific conclusions than when investigating more Fintech-technologies with a less thorough investigation.

9. FURTHER RESEARCH

Future research about the implications to the business model and value proposition of webshops when integrating other FinTech technologies than those focusing on integrating online payment gateways and methods will lead to a more exact conclusion of the overall implications of FinTech technologies in the field of online payments.

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11. REFERENCES

- Abu-Shanab, E. (2015). Factors influencing the intention to buy from online stores: An empirical study in Jordan.
- Aplazame. (sd). *Aplazame*. Retrieved from Aplazame: <https://aplazame.com/>
- Castro, N., Santos, H., Sá, V., & Magalhães, M. (2019). Study of the Means of Online Payment in the Portuguese Population. *2019 IEEE 12th International Conference on Global Security, Safety and Sustainability (ICGS3)*.
- Finkbeiner, P. (2016). *Social Media for Knowledge Sharing in Automotive Repair*. Springer International Publishing AG.
- Kim, C., Tao, W., Shin, N., & Kim, K.-S. (2010). An empirical study of customers' perceptions of security and trust in e-payment systems. *Electronic Commerce Research and Applications*, 84-95.
- Langdon, C., Roghe, F., & Shaw, M. (2000). Consumer Mass Market Online Payment Solutions. In M. Shaw, R. Blanning, T. Strader, & A. Whinston, *Handbook on Electronic Commerce* (p. 723). Springer-Verlag Berlin Heidelberg.
- Laudon, K., & Traver, C. (2016). *E-Commerce: business, technology, society*. Pearson Publishing Ltd.
- Lauwers, J. (2019, June 14). Interview Expert about Payment Solutions. (S. t. Wierik, Interviewer)
- Martínez, I. (2019, April 30). Interview Aplazame. (S. t. Wierik, Interviewer)
- MyChoice2Pay. (sd). *MyChoice2Pay*. Retrieved from MyChoice2Pay: <https://www.mychoice2pay.com/en/divvy-split-payments>
- Osterwalder, A., & Pigneur, Y. (2010). *Business Model Generation*. John Wiley.
- Osterwalder, A., Pigneur, Y., Bernarda, G., & Smith, A. (2014). *Value Proposition Design: How to Create Products and Services Customers Want*. John Wiley.
- Puentes, A. (2019, Mei 1). Interview MyChoice2Pay. (S. t. Wierik, Interviewer)
- Ritter, T., & Lettl, C. (2018). The wider implications of business-model research. *Long Range Planning* 51, 1-8.
- Schueffel, P. (2016). Taming the Beast: A Scientific Definition of Fintech. *SSRN Electric Journal* 4, 32-54.
- Skan, J., Dickerson, J., & Gagliardi, L. (2016). *Fintech and the evolving landscape: landing points for the industry*. Retrieved from Accenture: https://www.accenture.com/_acnmedia/PDF-15/Accenture-Fintech-Evolving-Landscape.pdf#zoom=50
- Stobbia, P. (2019, 6 18). Interview Expert Online Payment Solutions. (S. t. Wierik, Interviewer)
- te Wierik, J. (2019, Juni 5). Interview Azerty. (S. t. Wierik, Interviewer)
- Voermans, B. (2019, 6 19). Interview Expert Online Payments and Fintech. (S. t. Wierik, Interviewer)
- Yermack, D. (2019, May 28). Interview with Expert Fintech Payment Solutions. (S. t. Wierik, Interviewer)