

**BUSINESS PLAN OF AN ONLINE PLATFORM OPERATING
IN THE AUTO-REPAIR SECTOR**

| CARFIX PROJECT |

João Guilherme Fernandes Cruz

Dissertação submetida como requisito parcial para obtenção do grau de Mestre em Gestão

Orientadora:

Prof. Doutora Alexandra Marques Fernandes, Prof. Auxiliar, ISCTE Business School,
Departamento de Marketing, Operações e Gestão Geral

Co-orientador:

Prof. Rui Soares Ferreira, Assistente Convidado, ISCTE Business School,
Departamento de Finanças

Setembro 2018

BUSINESS PLAN OF AN ONLINE PLATFORM OPERATING IN THE AUTO-REPAIR SECTOR

João Guilherme Fernandes Cruz

Abstract

PT

Em Economia, é sabido que a assimetria de informação entre a procura e a oferta conduz à prática de preços injustos. O mercado da reparação automóvel é o melhor exemplo do que acontece quando esta assimetria tem lugar. Uma grande percentagem dos proprietários de automóveis não tem o conhecimento necessário para garantir que o orçamento proposto pelos peritos é justo e transparente.

Acontece a cada um de nós – quando o nosso automóvel tem um problema, vamos a uma oficina e eles encontram, misteriosamente, um problema maior que nos vai custar mais do que inicialmente esperávamos. Mesmo que confiemos no conhecimento deles, vimo-nos embora com uma pequena dúvida relativamente à veracidade do problema e ao preço do arranjo.

O progresso tecnológico resultou num grande aumento da velocidade à qual a informação é partilhada e a internet é uma das grandes causadoras deste efeito. Este fenómeno levou-me a encontrar a solução para o problema identificado no mercado de reparação automóvel. Uma plataforma de mediação entre os proprietários dos veículos / seguradoras e as oficinas reparadoras. Este serviço online ajuda os dois lados da ponte. Primeiro, através da criação de um mercado de competição perfeita virtual, através do qual os proprietários terão acesso aos melhores preços. Segundo, expondo as reparadoras a um número infinito de potenciais clientes. Após ter identificado esta lacuna do mercado, cheguei à conclusão de que tenho uma opção B para a minha carreira profissional, o empreendedorismo.

ENG

In Economy, it is known that information asymmetry between supply and demand leads to price unfairness. The car-service market is the best example of what happens when this asymmetry takes place. A high percentage of the car owners do not have the necessary knowledge to ensure that the budget proposed by the experts is fair and honest.

It happens to each one of us - when our vehicle has a problem we go to one of these reparation service providers and they mysteriously find a bigger problem which will cost much more than expected. Even if we trust their expertise we leave with a small doubt about the veracity of the problem they identified in addition to the uncertainty about the price.

The technological progress led to a huge increase in the speed the information is shared, and internet is one of the main causes for this effect. This phenomenon led me to find a solution for the identified problem in the auto-repair market. A mediating platform between car owners/insurance companies and auto-repair services' providers. This e-service helps both sides of the bridge. First, by creating a virtual perfect competition market whereby car owners

will get the best price. Secondly, by exposing auto-repair garages to an infinite pool of potential customers.

After having identified this market gap, I realized I have an option B for my professional career, entrepreneurship.

Acknowledgments

I would like to take this opportunity to express how thankful I am to my parents. I had the chance to be here writing my master's thesis due to their extreme effort in providing me the best education and conditions to be who I am today. I had the opportunity to attend the best schools in Portugal, growing up in Externato de São José, attending Escola Secundária do Restelo during high school, taking my bachelor's degree at Católica Lisbon School of Business and Economics and doing my master at ISCTE Business School. In fact, education starts at home and they have taught me that "liberty comes with responsibility" and now, I have the tools to be successful and happy.

Secondly, I would like to thank my sister for all the support she gave me since I was born and for being such a source of inspiration either due to her personality and to her successful career. Her advices were essential in every key moment of my life both as a person and professional.

Thirdly, a special thanks to ISCTE Business School, in the person of Professor Alexandra Fernandes and Professor Rui Ferreira. The main reason why I applied to ISCTE master's program was, along with its Excellence, the fact that this school strongly supports students who have an entrepreneurial mindset. Due to destiny or simply pure luck, I met these two wonderful professors who promptly helped me with my intention to create something new. I cannot count with the fingers on my both hands, the e-mails, the calls and meetings we had both about the theoretical content of this dissertation and the practical implementation of the business. Today, I am finishing my master thesis and implementing the business Idea with an extremely big company, which would not be possible without them. I will never be more grateful for the opportunity of having these professors in my life.

Last, but not least, I would like to thank both to my friends and girlfriend who gave me the necessary emotional stability, which proved to be key to attain all my goals.

I am the one who wrote this master thesis, but all the above-mentioned ones were responsible for making this happen and for that I could not be more grateful.

1.	LITERATURE REVIEW	3
1.1	ENTREPRENEURSHIP.....	4
1.1.1	<i>Defining Entrepreneurship</i>	4
1.1.2	ENTREPRENEURS	6
1.1.3	WHAT TRIGGERS SOMEONE TO BECOME AN ENTREPRENEUR?.....	6
1.1.3.1	<i>Attitudes</i>	7
1.1.3.2	<i>Social Norm (Women vs Men)</i>	7
1.1.3.3	<i>Controlled Behaviour</i>	8
1.1.3.4	<i>Short-term risk-taking preference</i>	8
1.1.3.5	<i>Psychological well-being</i>	9
1.1.3.6	<i>What triggers?</i>	9
1.1.3.7	<i>Bio-triggers?</i>	10
1.1.4	KEY DETERMINANTS OF SUCCESS	11
1.1.5	<i>Entrepreneurship's findings</i>	12
1.2	E-SERVICE.....	13
1.2.1	<i>Defining e-service</i>	13
1.2.2	<i>Pros and cons</i>	14
1.2.3	<i>E-services' Customers Satisfaction</i>	15
2.	BUSINESS PLAN	19
2.1	MISSION	19
2.2	VISION.....	19
2.3	VALUE PROPOSITION	19
2.4	PROBLEM / OPPORTUNITY	19
2.5	SOLUTION.....	20
2.6	PRICE.....	21
2.7	RISKS.....	21
2.8	TIME TO MARKET.....	22
2.9	MARKET DESCRIPTION	23
2.10	COMPETITION	25
2.10.1	<i>Direct Competition</i>	25
2.10.2	<i>Indirect Competition</i>	26
2.11	POTENTIAL CLIENTS/USERS	26
2.11.1	<i>B2B</i>	26
2.11.2	<i>B2C</i>	27
2.12	MARKET COMMUNICATION	27
2.12.1	<i>Segmentation</i>	28
2.12.2	<i>Target</i>	29
2.12.3	<i>Positioning</i>	30
2.13	STRATEGIC GOALS	30
2.13.1	<i>Business Goals</i>	30
2.13.2	<i>Qualitative and Quantitative goals</i>	31
	Short-Term	31
	Long-Term	31
2.14	MARKETING MIX.....	32
2.14.1	<i>Services</i>	32
2.14.2	<i>Place</i>	32
2.14.3	<i>Promotion</i>	33
	1)WOM (Word of Mouth)	33
	2) Social Media & Ads.....	33
	3) Offline	34
2.15	INTELLECTUAL PROPERTY	34
2.16	FINANCIAL FORECASTS.....	35

2.16.1	ASSUMPTIONS.....	35
2.16.2	REVENUES	36
2.16.3	EXPENSES	36
	2.16.3.1 <i>Variable Costs</i>	36
	2.16.3.2 <i>Fixed Costs</i>	37
2.16.4	INCOME STATEMENT	40
2.16.5	INVESTMENTS	41
2.16.6	FINANCING REQUIRED	41
2.17	TRACTION	44
3.	REFERENCES	45
1.3	BOOKS.....	45
1.4	JOURNALS.....	45
1.5	UNPUBLISHED WORKS	48
1.6	ELECTRONIC DOCUMENTS.....	48

Sumário Executivo

A presente tese, em formato de plano de negócios, vem defender a existência de uma oportunidade de negócio viável no mercado de reparação automóvel, a Carfix.

A Carfix é uma plataforma que estabelece a ponte entre seguradoras, frotas automóveis e (ou) proprietários individuais, e as oficinas reparadoras. Esta inovação permite o cruzamento entre clientes e prestadores de serviços, em função dos standards pré-estabelecidos por cada um.

O projecto tem como missão devolver a confiança ao mercado de reparação automóvel com um mecanismo que, por um lado garante preços justos, transparência e qualidade dos serviços prestados ao cliente e, por outro, aumenta a exposição das pequenas e médias oficinas a um universo mais alargado de consumidores.

O mercado de reparação automóvel é um exemplo flagrante do que acontece quando há assimetria de informação entre os clientes e os prestadores de serviços. Os primeiros, tendo menos (ou nenhum) conhecimento em engenharia mecânica são levados a pagar preços que frequentemente não são proporcionais ao real problema das suas viaturas.

Os segundos (pequenas e médias oficinas), tendo menos fundos de maneiio, vêm-se ultrapassados pelas grandes reparadoras que apresentam estratégias de marketing mais agressivas, canalizando para si a grande maioria dos serviços.

As seguradoras são também parte importante desta relação, uma vez que todos os carros que circulam em Portugal e na Europa são objeto de seguro. Este terceiro agente tem a preocupação constante de oferecer a melhor experiência ao seu consumidor ao menor custo possível, sendo por isso afetado pela falta de transparência do sector.

A Carfix é a solução para os problemas acima identificados. A plataforma permitirá aos seus clientes, a peritagem das suas viaturas de forma isenta, transparente e imediata e, tendo por base o relatório do perito, o acesso a orçamentos de diferentes prestadores de serviços. Com este mecanismo os clientes poderão escolher onde reparar a viatura em função do preço, do tempo de execução e do *rating* de satisfação dos clientes anteriores.

Os prestadores de serviços, uma vez presentes na plataforma, receberão pedidos de reparação pendentes, já detalhados pelo perito, para os quais poderão apresentar a sua melhor proposta. Desta forma terão acesso a um universo de clientes alargado sem custos diretos.

Estima-se que a frequência anual de sinistros é de 11,2%, num universo de 6,5 milhões de automóveis a circular em Portugal. É nos sinistros que reside o maior volume de negócios do sector com um valor médio por serviço a rondar os 1000€. Tendo em consideração o facto de os proprietários serem obrigados por lei a ter seguro dos respetivos automóveis, as seguradoras assumem o encaminhamento das viaturas danificadas. Este encaminhamento apenas terá lugar

caso os proprietários acionem o seguro e, caso assim aconteça, as seguradoras encaminham as viaturas para oficinas com as quais possuam vínculos protocolares.

Atualmente, 4251 oficinas reparadoras automóveis operam em Portugal tendo declarado um volume de negócios que atingiu 1 Bilião de euros (€) em 2016.

Trata-se de um mercado atrativo o que se reflete nos números acima apresentados.

A Carfix estabelecerá a ponte entre os vários intervenientes no mercado em questão e, em contrapartida, receberá uma comissão de 20% do valor das reparações. Desta forma não haverá custos diretos por parte de nenhum dos agentes, apenas uma partilha de rendimentos que apenas tiveram lugar devido à plataforma.

Para que seja possibilitada a implementação e início das operações da Carfix no mercado, existem duas hipóteses. Por um lado, através do financiamento de capital inicial no valor de 33.784 euros (€). Através deste financiamento a Carfix terá capacidade de desenvolver a plataforma e aplicações, complementado por protocolos assinados com oficinas e clientes (seguradoras). Por outro lado, através de um acordo com uma empresa do sector, para desenvolvimento interno do negócio.

A inovação será primeiramente implementada na cidade de Lisboa, proliferando para o resto do país anualmente. De acordo com as projeções, o negócio apresentará um lucro de 1.582 euros (€) após os primeiros 12 meses de operações. Com a proliferação do negócio, o reconhecimento do mercado e conseqüente aumento do número de parcerias e clientes, calcula-se um lucro de 119.041 euros (€) ao fim de 5 anos de operações.

Tratam-se de números promissores que espelham a real oportunidade detalhada no plano de negócios apresentado.

1. Literature Review

When asked about where one wants to be in 10 years from now, the most common answer given is “I see myself surrounded by happiness with a healthy family and financial wealth”. The answer did not change that much across the last decades; however, the context has changed exponentially.

It is fair to say that three or four decades ago, apart from mid-high-class families, very few could afford to take a bachelor’s degree. As education was not of such an easy access as it is nowadays, when a young one had accomplished a degree, the “world would be on her/his feet”. Having a degree meant that it was almost certain that, at least, the desired financial wealth was attainable.

Today in 2018, everyone (rich or poor) have access to education, except in under-developed countries. This fortunate fact has increased the number of people with high knowledge and skills that want to pursue the same goals for which they need the same jobs.

Let’s consider the number of people with high knowledge and skills as “demand” and the jobs that lead them to achieve their goals and dreams, as “supply”. Through the theory of supply and demand by Adam Smith we can see that the increase in demand shifts its correspondent curve upwards to the right, which means that the equilibrium price goes up.

The price in this case can be considered, the need for a master’s degree instead of just a bachelor, the need of having a certain average on the courses meaning, a higher monetary/time investment in the education to be one step forward to accomplish the goals they set.

Thanks to Internet and the e-services created around it, people now have two options when drawing their professional path to accomplish their dreams, which generally includes financial wealth.

Recalling the hypothetical analysis through Adam Smith’s theory, the first and the most obvious, is paying the “price” of time and money. The second option, that has becoming popular recently, is to follow a different path.

Following a different path means not following standard behaviors for instance, looking for a job position in one of the big companies present in the market and try to “climb its hierarchy” by putting that “extra-mile” effort when working.

This alternative has the name of entrepreneurship. This chapter addresses, precisely, entrepreneurship (the alternative path) and e-service. These are the two outstanding topics, included within the business idea and the plan itself, which will be addressed from a theoretical perspective by recurring to articles, books and journals. The main purpose of this research is

either to sustain and support the business idea and the arguments presented in this dissertation using valid and reviewed scientific analysis for each subject.

1.1 Entrepreneurship

1.1.1 Defining Entrepreneurship

Despite Entrepreneurship's increased popularity the concept lacks a precise definition. It has been given more focus on who the entrepreneurs are and what they did to become one (Mazzarol and Volery, 2015). As it will be further demonstrated, not everyone has the skills and psychological characteristics to become an entrepreneur which is one of the reasons why the "who is" question is more under the scope than the "what is".

In order to counteract this trend, in this dissertation, entrepreneurship will come first followed by an analysis on who are the entrepreneurs and why did they become one.

Many authors have their own definitions on entrepreneurship (Mishra et al., 2015).

Shane and Vankataraman (2000: 218) defined the field of entrepreneurship as "the scholarly examination of how, by whom and with what effects opportunities to create future goods and services are discovered, evaluated and exploited".

Anderson and Starnawska (2008: 4) define it as "the process of becoming, thinking, planning, conspiring, doing the thing that may lead to entrepreneurship".

Shaper (2014: 4) argues that entrepreneurship is "the process whereby an individual discovers, evaluates and exploits a business opportunity".

Mishra and Zachary (2015: 251) take the context where entrepreneurship takes place into consideration defining it "as a process of value creation and appropriation led by entrepreneurs in an uncertain environment". The authors go into more detail when defining the process itself. According to them the process "involves the entrepreneur identifying an external opportunity; matching the entrepreneurial resources at hand with the opportunity to effectuate an entrepreneurial competence; acquiring external resources, if necessary; creating sustained value; and appropriating the entrepreneurial reward" (Mishra et al., 2015: 252).

The above proposed definitions are quite similar, ones more detailed than others but in general agreement. The first common aspect is the identification of an opportunity in order to start the entrepreneurial process. The concept of 'opportunity' is commonly confused with the term 'idea' however, they do not mean the same thing. Vogel (2017: 958) distinguishes venture ideas from venture opportunities. The author defines venture idea "as a preliminary and mostly incomplete mental representation of the concept for a potential future venture." People

generally have venture ideas through the identification of personal or others' unmet needs in the market. The quality of these ideas has a significant influence on the future market outcomes (Kornish et al., 2014) but the idea itself needs to be polished and this is where the entrepreneurs' skills have their first impact towards the venture creation.

It is difficult to measure the quality of something that is still not implemented with a broader analysis. The reason behind this, is the fact that two different people may disagree about the ideas' potential simply because they have both different external and internal influences. Who is wrong and who is right? – we never know.

The presence of a proper analysis and evaluation on a venture idea is what makes it turn (or not) into a venture opportunity. Vogel (2017: 950) describes venture opportunity as “a favorable combination of endogenously shaped and exogenously given circumstances that make it both desirable and feasible for the entrepreneur to exploit a venture concept and to introduce a potentially value-adding offering into the marketplace”.

It is fair to say, given the triggers for the appearance of a venture idea (market push, desire to start, or resource push), the author defends that the context where the entrepreneurs are placed has a significant influence on the assessment of an opportunity. It is at this stage, the assessment of an opportunity, that other similar aspects mentioned in the above entrepreneurship's definitions come out, they are planning and evaluation. When planning, analyzing and evaluating a market opportunity, entrepreneurs elaborate a business plan that is key from both internal and external viewpoints. From an external point of view, a business plan, in principle, can be seen as a document that commercializes the business idea as a whole towards potential investors and stake-holders (Schwetje et al., 2007). Its financial figures along with a clear identification of a potential market opportunity are key to conclude if it is worth to be financed, specifically serving potential investors needs for a grounded decision.

On the other hand, other than a way to commercialize a business idea or raising funds, it is also a guide of actions to be taken, before, during and after implementation. The business plan serves as a “road map” for the organization, “much like an atlas on a cross-country automobile trip” (Schneider, 1998: 31). Every entrepreneur who wants to be one step forward towards the success uses it due to the features it has and the conclusions it helps to make. A real benefit of a business plan is the fact that in the act of preparing it, the would-be entrepreneur must develop the business idea on paper and firm up his/her thinking about how to launch it (Ebert et al., 2017). In other words, a business plan is entrepreneurs' first contact with the industry as, through this document elaboration, they will get to know which is the real gap that the idea might fulfill (in case there is one) and how they will respond to it.

The last, but not least aspect the authors referred, after having identified a clear opportunity with the help of a business plan, is the concept of exploitation. Exploitation “refers to building efficient, full-scale operations for products or services created by, or derived from, a business opportunity” (Choi et al., 2008: 1). In other words, after identifying a clear opportunity and having assessed its feasibility, entrepreneurs use the resources on-hand to implement the product or service in the market in a sustainable way to reach the goals they have previously set.

1.1.2 Entrepreneurs

As per the suggested Entrepreneurship’s definition by Schaper (2014), an entrepreneur is an individual who finds a market opportunity and creates a business around it, “a person who sets up a business or businesses, taking on financial risks in the hope of profit” (Oxford English dictionary). “Another insight found in some definitions recognizes that the entrepreneur is commonly seen as an innovator of new ideas and business processes” (Foer, 2016: 480). An entrepreneur is not necessarily an innovator neither his/her business has to be an innovation in the market.

In his article, Foer (2016) gives the example of an entrepreneur who purchases a franchisee from McDonald’s. Some might argue that it can be an innovation given a certain geographical context, for example. However, McDonald’s is an already existing brand and the products this franchisee will offer to his clients will not be new worldwide.

From this, it is possible to conclude that an entrepreneur is not necessarily an innovator. An entrepreneur can be someone who sets up a business, of an already existing service or product, by having previously concluded its financial viability thus, identified a clear evidence of a market opportunity.

1.1.3 What triggers someone to become an entrepreneur?

Zhang (2015) recur to the Theory of Planned behavior by Ajzen (1991) as a starting point for their analysis on what triggers entrepreneurs to become one. Ajzen (1991: 206) concluded in his study that attitudes, social norms and perceived control are the determinants of a certain behavior, “Attitudes toward the behavior, subjective norms with respect to the behavior, and perceived control over the behavior are usually found to predict behavioral intentions with a high degree of accuracy”. The authors used a sample of university students in order to test if these 3 determinants plus 2

new ones (short-term risk-taking preference and psychological well-being) have a positive correlation with the intention to start a business.

Before going straight to the main conclusions, it is key to define each of the proposed determinants in order to better understand the implications of this analysis.

1.1.3.1 Attitudes

Attitudes as to do with how individuals evaluate the components of the behavior under the scope, either un-favorably or favorably (Zhang, 2015). It is according to this evaluation that an individual concludes if the behavior is attractive or not.

1.1.3.2 Social Norm (Women vs Men)

Social norm concerns the perceived pressure others make on the individual to have a certain behavior. Culture values and gender differentiation are part of this determinant of entrepreneurial intention (Entrialgo, 2017). Specifically, gender has being subject of many debates due to the inequality observed in society between man and women. Despite the general agreement on the potential women have to boost the economy, Thébaud (2015: 686) concluded in her study, through the analysis of the entrepreneurial activity rates across countries by gender, that “women are substantially underrepresented in entrepreneurship across countries” in relation to men. This gap can be explained by the difficulties that women face when trying to start a new business. “Examinations of entrepreneurship in gendered contexts have revealed barriers that constrain the establishment and growth of ventures run by females” (Murphy et al., 2007: 127). One of these difficulties is the gender-based discrimination by investors in relation to women (Marlow et al., 2005; Verheul et al., 2012). Alsos (2017) uses a signaling theory approach to explain the entrepreneur-investor relationship. The authors suggest us to consider entrepreneurs and investors as signalers and receivers, respectively. Thus, by consequence, the communication entrepreneur-investor is named as signals. Entrepreneurs have full information about their venture and potential investors don't which, in other words, means that there is a clear information asymmetry between the signaler and the receiver. It is by taking this fact into account, that investors demand reliable signals of venture quality from entrepreneurs in order to reduce the uncertainty when making investment decisions. However, these signals are perceived differently depending on the signaler's gender. One of the signals that investors value the most when this uncertainty takes place is the entrepreneur's network (social capital). The relationships with other individuals, experts or

other business-related connections, give investors signs of credibility and trust which help to overcome the doubts they might have.

This is where (some argue) the gender-gap relies.

Sullivan (2012) defend the thesis that women do not have such well-constructed social capital (network) as men and “have been found to have less entrepreneurial experience and less experience from business financing” (Alsos et al., 2017: 572). For that reason, women have to make an extra effort in order to guarantee that the receivers find trust and credibility in their message (signals).

Women have two different strategies to overcome this differentiation (Alsos et al., 2017). First, they emphasize the experience they have through both, their professional and entrepreneurial career. Second, women include men, with the characteristics that investors value the most, as their board members or in other important positions. By doing so, the women entrepreneurs will show investors the deep involvement within the venture, of people that are ‘trustable’ and possess the necessary credibility to persuade them to support the venture. Ideally, women should not have to put that extra effort in practice to balance with men. I personally believe that this is transitory and in 10 years now, no women will need to do more than men, to deserve investors’ trust and capital.

1.1.3.3 Controlled Behaviour

The controlled behavior relates with the degree to which individuals believe they can acquire or develop resources and identify opportunities to start a new venture (Zhang et al., 2015). There are two different types of resources. On one hand the intangible, where the business-related knowledge, networking skills, and other psychological characteristics are included. On the other hand, the tangible which relates with the so needed capital funds and other key physical resources needed to perform the business. According to the authors, students are in general confident on having the necessary intangible resources to start a business.

1.1.3.4 Short-term risk-taking preference

To better understand entrepreneurs’ risk-taking preference there are two notions which need to be considered (Zhang et al., 2015).

The first is risk propensity that as to do with the degree of willingness to take risks consistently.

The second is risk perception. As the name suggests, the concept relates to entrepreneurs' evaluation (a priori) of an opportunity/threat, if he/she is capable of that behaviour with probability estimation.

Time is key when it comes to risk-taking behaviours. Some prefer to wait a long time for the unknown outcome and some don't. Entrepreneurs with long-term risk-taking preference are, according to authors, less likely to start a new venture as they plan more than act since they have low-risk propensity and high-risk perception.

1.1.3.5 Psychological well-being

Psychological well-being is the other new dimension the authors propose to be considered as one of the triggers to entrepreneurial behaviours. Psychological well-being is about self-evaluations that potential entrepreneurs do to understand if they are truly prepared and capable of starting a venture. When starting a venture and guaranteeing its survival one has to face many obstacles so that psychological well-being is key to be succeed. A sense of self-determination is seen as one of the main determinants of whether one is an entrepreneur or not. It relates with the autonomy of an individual and his/her need for control. Positivism follows self-determination in its influence on this dimension since it helps individuals to handle crisis in a constructive way (Zhang et al., 2015).

1.1.3.6 What triggers?

In the sample of university students that were surveyed, the authors tested the impact of the 5 dimensions in the entrepreneurial intentions of the individuals.

According to the results, the most influent trigger is the controlled behaviour. The university students demonstrated through their answers that the self-belief of having the necessary resources to start a new venture is what triggers them the most to become entrepreneurs.

Social norms also play a role in students' intentions. The social context where individuals are placed as a role when deciding to start a business. In this case, what was found is that in case there is a social support on starting a venture, students are positively tempted to become entrepreneurs.

Following the same trend and, in the presence of attitude, social norm and controlled behaviour, short-term risk-taking preference have proven to have a positive impact in the entrepreneurial intentions.

However, the authors failed to prove the positive relationships attitudes-entrepreneurial intentions and psychological well-being – entrepreneurial intentions.

The first, they argue, can be explained by the fact that, due to the lack of entrepreneurial and professional experience, students are less capable to evaluate the attractiveness of an entrepreneurial activity.

The second, that initially was believed to have a positive relationship with the intentions, proved to be exactly the opposite. The authors found that the more self-confidence and determination students have, the more certain and confident they are to find a job. Thus, it seems less attractive for them to opt for B option of creating a new business.

1.1.3.7 Bio-triggers?

Through the theory of planned behaviour and the study conducted by Zhang (2015) on the university students' entrepreneurial intentions, it is clear that there are both internal and external triggers.

When assessing the role of social norms towards entrepreneurial intentions, Thébaud (2015) pointed out the existing unbalance (in quantity) between men and women entrepreneurs across countries.

Murphy (2007) mentions the fact that there are extra barriers to women when establishing and growing a new venture, barriers that men do not face. Verheul (2012) argued that this fact can be explained by the gender-based discrimination by investors, which Alsos (2017) proved to be true, recurring to the signaling theory approach. The author found out that one of the main handy-caps women have in relation to men is their (shorter) social capital / networks. When the uncertainty takes place, investors are influenced by entrepreneurs' social capital when making their investment decisions.

The interesting fact here is that the construction level of networks is generally lower for women. This is not a contextual issue only, it has to do with the gender there might be a biological explanation for this.

Bönte (2016) conducted a study to assess the impact biology has on individuals' entrepreneurial intentions. The author starts his assessment by assuming that risk takers are in the pole position to become an entrepreneur, following the same analogy of (Zhang et al., 2015) that future entrepreneurs usually have the tendency to act more than plan, independently of the risks. Risk-taking is, in general, a masculine characteristic (Bönte et al., 2016). As seen in the study of university students' entrepreneurial intentions, social norms and short-risk-taking preference

(high risk propensity), are key determinants that influence individuals to become entrepreneurs. In fact, risk propensity was proven to be positively related with entrepreneurial intention (Zhao, 2005). The author found that the Prenatal Testosterone Exposure (PTE) has influence in the early human's brain formation leading to both physical and psychological masculine characteristics. Thus, there might be an indirect link between PTE and entrepreneurial intentions mediated by risk-taking (Bönte et al., 2016). Meaning, PTE is believed to be positively related with general risk-taking and, general risk-taking is believed to be positively related with entrepreneurial intent. The author tested this hypothesis and came up with the conclusion that, in fact, these relationships exist. Individuals are not only influenced by nurture but also nature to become (or not) entrepreneurs.

1.1.4 Key determinants of success

Having identified the triggers to entrepreneurial intentions, the role that gender has as a determinant of these intentions, as well as the fact that biological characteristics matter, I find it meaningful to identify which are the necessary ingredients to succeed in this environment.

Every company's strategy has the same goals, to survive and to grow. The digital era made everything change faster which made it even more challenging to survive. However, 9 out of 10 startups do not survive (Patel, 2015). Better than learning from own mistakes is learning from others.

Patel (2015) calls readers' attention to four aspects that highly contribute to startups failure.

The entrepreneur identifies the lack of market need as one of the main reasons of failure. The fact that entrepreneurs create a new venture based on a product or service that doesn't meet the market needs, is the reason why 42% of startups failed to survive.

Second, entrepreneurs usually share tasks between the team forgetting the fact that startups are more organic, and tasks overlap each other, leading to a misfocus on the core business. Each team member has to work in collective and communicative way so that no one misses the real goal of his task.

The third reason identified is the slow growth startups face. If startups don't grow fast that means they're about to fall. Commonly, entrepreneurs plan to have a fast growth (which is desirable), however when that doesn't happen everything will be in danger and one of the consequences is the possibility of running out of cash.

The fourth aspect is when entrepreneurs have teams that are not versatile. Hiring people as big firms do, is a mistake. Calling up the third determinant (Patel, 2015), startups need versatile people with the ability to face a wide range of problems and barriers to perform. The job

description is wider than the ones bigger firms offer that's why the hiring recruitment & selection has to be different in terms of the skills startups are looking for.

Mckelvey (2016) draws our attention to the fact that having the right ingredients is not enough. As markets and competing firms are constantly changing, the success will be all about the mix of the right ingredients. Meaning, the capacity firms have to adapt themselves to both external and internal forces is what determines their survival (success).

Successful startups have entrepreneurs who "learn how to be flexible in their organizing, to improvise, innovate, use effectuation, and so on" (Lichtenstein, 2016: 45), so that they are able to overcome any surrounding changes.

Another interesting finding is that regardless of what activity successful entrepreneurs is doing (business planning, creating the website for example), he/she does not do too much in the early stages (Lichtenstein, 2016). According to the study, entrepreneur's success is correlated to the pace of the activities they perform.

1.1.5 Entrepreneurship's findings

Different authors give their own definitions on entrepreneurship; however, they do not differ that much from each other in terms of content. By summing up the different definitions found in the literature, I came up with my own:

Entrepreneurship is a three-stage process. Internal and external forces trigger an individual to have a business idea at the first stage. Second, the individual performs a deep analysis, plans and evaluates if there is an opportunity. At last, in case there is in fact one opportunity, he/she exploits it creating value to society.

An entrepreneur is precisely an individual who creates a venture after having concluded the existence of a market opportunity. However, not everyone is attracted to the entrepreneurial world. Unfortunately, gender still plays a role when deciding which path one will follow. Women face difficulties that men do not. They are in general more influenced by the society norms than men.

Through the literature it is clear that the context where an individual is placed, determines how attractive entrepreneurship looks, how motivated they are by social support and also their willingness to take risks, which is proved to be greater in men. Individuals are also influenced by biological characteristics. It was concluded that Pre-natal Testosterone Exposure (PTE) as influence on entrepreneurships. This exposure results in masculine both physical and psychological characteristics that indirectly leads individuals to have entrepreneurial intentions in the future.

Despite the fact that some individuals have the characteristics to become an entrepreneur, and are actually one, that does not necessarily mean that they will be successful. There are several aspects that entrepreneurs have to take into consideration in order to survive within that world but, the most important one, due to the fact that we are living in a digital era, is the capacity to adapt. The market environment is changing continuously, and successful start-ups have entrepreneurs who are flexible and versatile enough to overcome these changes.

1.2 E-Service

It is fair to say that we are facing an electronic revolution where technological information systems are playing a key role in both business world and society.

This phenomenon led to a continuous change in the way people interact and do business, with the appearance of e-services.

1.2.1 Defining e-service

Similarly, to what happens with entrepreneurship, e-service lacks a unique and precise definition as different researchers have been giving their own (Taherdoost et al., 2015) based on their point of view meaning, their expertise. E-services are “those services that can be delivered electronically” (Javalgi et al., 2004: 561). E-services are “an act or performance that creates value and provides benefits for customers through a process that is stored as an algorithm and typically implemented by networked software” (Evanschitzky et al., 2007: 16). Taherdoost (2015: 1068) defines e-service “as the provision of interactional, content-centered and electronic-based service over electronic networks”. E-services are “activities provided by provider to a recipient; these services are non-material; they are provided by means of information and communication devices and the result of their consumption can be a benefit, service or acquisition of property” (Kvasnicova et al., 2016: 193).

What is common among these definitions and all others, is that technology plays the main role. Technology is key when defining this concept. What distinguishes e-service from traditional service is, in fact, the role played by technology. E-services can be performed without human contact, meaning face-to-face contact.

This new way of interaction as its pros and cons.

1.2.2 Pros and cons

The digitalization phenomenon led to an exponential increase in the information diffusion speed. The increased ease of access to information through Technological information systems (TIS) along with all the advantages for users, have been resulting in an increase in the number of e-services offered despite its downsides.

Most commonly, the e-services take the form of an online platform thus, this is a service that depends on the internet functionality. In case there is any problem with the internet connection or the platform itself, the company might suffer strong damages along with the risks of fraud, security and privacy concerns. Summing up to these threats, the users usually find it to be less personal, as it no longer implies personal contact between buyers and sellers.

However, these weaknesses and threats are being overcome by the opportunities these tools offer to stakeholders. E-services, by default, turn every process much faster, it improves every aspect related with the information flow, thus, customer satisfaction is improved and also there is a cost effectiveness (Taherdoost et al., 2015).

Due to the wider range of information users have access to, nowadays people must spend time and money to find the proper information according to their needs (Kim et al., 2018).

As a consequence of this along with the consequences caused by information asymmetry in certain business sectors, e-services such consumers vs sellers mediating platforms are key for both sides of the bridge as seen above.

AirBnB is one good example of this type of service. This platform is nothing but a bridge between 2 players with different purposes, hosts and guests. Hosts use it to find guests, and guests use it to find places to stay. There's no need to physically go to an AirBnB agency to book a stay or, from the other point of view, to rent place a renting ad.

On one side, it reduces buyers' searching costs (Baye et al., 2001) and gives them the possibility to make rational purchases of goods or services (White et al., 2016). On the other side, it increases sellers' exposure to more buyers (Edelman et al., 2016).

As mentioned, part of the advantages that e-services brought into the game, are the decrease in costs and the enlarge of attainable customers.

The first is mainly due to the increase in both, efficacy and efficiency in logistics, meaning, less steps are needed to reach the same goal.

The same happens when it comes to communicate with customers and potentials. Technology made it easier to reach out a bigger pool of customers, independently of the geographical distance between the sender and receiver.

These pros are convincing enough for moving innumerable firms from traditional trade to an electronic environment with the creation of e-services where part of human capital is replaced by technology.

Even though the pros are convincing, e-service providers still have to make some efforts to overcome users' security concerns and turn this more personal. Based on this fact, e-service providers must design their platforms so that they are appealing and easy to use, as well as to give fast response to any questions, doubts and feedbacks from user to guarantee their satisfaction and loyalty (Zhang et al., 2006). In fact, e-services are still a new domain for customers who were used to physically go to shops in order to purchase their goods or services. This is a less personal way of doing business as Zhang (2006) argued, and for that reason e-service providers have to do everything on their hands to gain users' trust. Most commonly people have to register themselves using credit card and other personal details, they need to find these platforms trustable, otherwise they will not to incur in any personal risks to buy something. I will go deeper on what e-service providers can do to improve customers' satisfaction later.

1.2.3 E-services' Customers Satisfaction

Even with all the added value e-services can bring to the world, simply moving from traditional to e-services is not enough if these do not have quality. Meaning, e-services need to meet customer wants so that it can make any positive difference (Zhang et al., 2006). E-service is still a service and, in order to survive, it has to guarantee customers' satisfaction.

However, it was found that, in case the services do not have the desired quality, that does not necessarily result in a switch to traditional services by customers. According to the study on the impacts e-services' quality have in customers' behaviour, it was concluded that when an individual as intrinsic preference for e-services he/she will not switch into traditional means based on a perceived lower quality of the first (Sousa et al., 2012). Services' quality, considering a universe of users of intrinsic preference for this new way of buying, have the power to prevent them from opting to another e-service channel (competitors) (Sousa et al., 2012). Thus, e-services quality have different impacts depending on customers' characteristics. In one hand, it is key to convince traditional customers to switch to this new way of buying. On the other hand, it works as a tool to gain their loyalty.

Some authors added to the importance service quality has to consumers, the fact that their buying experience is also key when it comes to gain their trust and loyalty (Rust et al., 2001). This means that there are two big dimensions, e-service providers need to cover in order to succeed.

The first is the quality of the service they are offering. It is key that the service offered meets customers' needs. Service quality comes as the first dimension because it has to do with the second stage of entrepreneurship, described in the previous chapter. It is at this stage that entrepreneurs assess if their business idea, regardless of what it is, actually meets the needs of the market. It is also possible that, what was a need before might not be a need in the future, but this dimension is all about the continuous analysis of the market and for that reason I considered it as first. The second is the customer experience. If users find it difficult to use or do not find it trustable he will not use it again in the future. The customer experience comes as second, but it is not of less important. The needs of the market change because the customers are changing constantly and what can be a good service and a good experience today, may not be the same in the future. For that reason, e-service providers have also to continuously pay attention to the dimensions under customers' online experience, to guarantee their satisfaction.

There are four dimensions of customers' online experience that e-service providers have to consider and understand so that they are able to enhance it (Evanschitzky et al., 2007). Entertainment is one of these dimensions. There is a common belief that entertainment has to be really interactive. However, the new trends are not in agreement with this. Let's take the example of, what many consider to be the 21st century job: streamers/youtubers. The increasing popularity of streamers, that consequently means that there is an increasing demand for what they offer, goes in the opposite way of the common belief with which I began this paragraph. This new trend shows us that people are preferring to click less and watch more (Karat et al., 2002). This can explain the new feature Asos.com has implemented in its products' description. The store has included videos of model using the respective items, lowering the number of clicks users would need to use when zooming in and out through pictures.

Educational is also part of this group but it requires more interaction from users than entertainment does. The online environment is still an unknown field for many, either because these are 'freshers' or due to the continuous developments and changes e-services face. The lack of knowledge (education) in the use of e-services generates fear and contempt on its users

(Evanschitzky et al., 2007). It is key that customers get the necessary knowledge to make an efficient use of the features offered by platforms and have a good experience. Another feature that was found to be a source of fear, is e-services' financial security (Evanschitzky et al., 2007). If firms take this educational dimension as one of serious importance, they will certainly make efforts to overcome the lack of knowledge of its user. Examples of these efforts are the tutorial videos on how to shop, a "Frequently Asked Questions Section" (FAQS), customer services or support and also a company description including its history, philosophy and security policies (Kotha et al., 2004).

The third dimension is esthetic. Unlike the other two dimensions described above, this one does not require users' direct interaction. As its name suggests, esthetic dimension relates with everything that stimulates user's sensors, calling up their attention and making them feel engaged with the platform. Esthetics have proven to have positive impact on sales. In fact, it can be more advantageous because, contrary to promotional approaches that imply direct costs with each transaction, it also decreases costs. (Lu et al., 2013). A good web design can generate positive feelings from users, which will influence them to spend more time surfing on that platform and also have impact on their purchase intentions (Evanschitzky et al., 2007). What this dimension "tells" us is that web design is key to offer customers a good experience through sensorial stimulators as colors, sounds and its organization so that users do not feel bored or confused when using it.

The fourth and last dimension of customers' online experience is the escapist. This dimension implies a much higher involvement by users than the others, as its name suggests. Escapist derived from the term 'escape' is a type of experience where nothing else matters to users when they are into it. This is a type of experience commonly found in online games where users assume a character "virtual personality" and, in virtual communities such social networks. Social networks are virtual communities that are playing a key role in society. Almost everyone has a Facebook account and, when it comes to professional careers, a LinkedIn account (which is not a typical social network but still a virtual community) is a really important engine to meet available job positions and candidates. Users are so engaged within this type of experiences that firms are using it as marketing channels and for other e-commerce purposes such contact with customers. TAP airlines is great example of this strategy. The company created an account on social networks such Facebook. Clients who have questions, doubts or feedbacks find it easier to do it through these channels than from the traditional ways, due to the much faster reply they get from receivers.

Summing up e-service providers have to guarantee e-service quality which has proved to be key for customers' satisfaction, their loyalty and to increase the conversion rate of visitors. Secondly, privacy and security are basic demands for customers to feel comfortable using them. Having guaranteed these two inputs, e-service providers must design their interfaces in a way that users find it to be a great experience which will automatically lead them to be satisfied with the service (Zhou et al., 2018) recommend it to others and use it, over and over again.

Following the information gathered from the many authors cited along this literature review I am able to make personal conclusions related with both entrepreneurship and e-service. First, there are many possible reasons that can explain why I want and will be an entrepreneur. One, is the fact that due to a personal experience I was able to identify a possible gap in the market and a business idea that might full fill it. Secondly, and proved to be one of the main triggers, the power of context (people, environment, economy in general). I consider myself surrounded by people who generally accept my option of becoming an entrepreneur, which can be explained by simple luck or even by having chosen to surround myself by these kinds of people. The power others have in our choices goes beyond what we expect, this is the reason why I chose to enroll at ISCTE Business School, which proved to support students in these decisions in the past and now.

Second, I was able to understand the real definition of an entrepreneur thus, I understood what I need to do to consider myself one.

Third, there were identified the opportunities e-service offers to the economy and also the barriers. One of the opportunities identified is that with the speed of the information flow it can help consumers abolishing any information asymmetry in relation to service that is resulting in unfair prices. However, these consumers need some entrepreneurs who are able to use these opportunities offered by the "e-world" to create something of an easy access and appealing enough so that it answers to their needs.

Fourth, and following the third conclusion the answer for this information asymmetry is a bridge that in the "e-world" has the name of mediating platform.

Entrepreneurship is challenging, and the first challenge entrepreneurs face is to assess the financial viability of a business Idea. It is with the support of the literature reviewed that I will assess the viability of a mediating platform in a market (further described) where it is proved to exist information asymmetry between clients and service providers.

2. Business Plan

2.1 Mission

To connect car owners with small and medium auto repair shops and bring confidence to this relationship, through an online platform.

In one side through the best customer experience, by bringing prices fairness, transparency, quality and trust, by means of information sharing, to its users.

On the other side, by bringing both clients and visibility, to small and medium enterprises.

2.2 Vision

To be the option number 1 for every car owner who needs auto repair services and the key partner for both assurance companies and every small and medium enterprise operating within this market.

2.3 Value proposition

CARFIX eliminates the problem of the average person knowing far less about cars and mechanics in comparison to the auto-repair garages.

It is not only the first solution in the market as it is also a convenient, accessible, fair and transparent online platform that ultimately will make every car owner and new technologies adopter spend less in their vehicles' repair and maintenance.

This is also a valuable solution from the assurance companies' point of view. These are seeking improvements in their customer experience as well as cost-cutting strategies in order to increase their margins and either maintain or attract new customers.

CARFIX provides yet another advantage as it gives auto-repair garages a new marketing channel for attracting a new pool of customers without spending any euro in advance.

2.4 Problem / Opportunity

In Economy, it is known that information asymmetry between supply and demand leads to price unfairness. The car-service market is the best example of what happens when this asymmetry

takes place. A high percentage of the car owners do not have the necessary knowledge to ensure that the budget proposed by the auto repair garages or the experts is fair and honest.

It happens to each one of us - when my vehicle has a problem, I go to one of these reparation service providers and they mysteriously find a bigger problem which will cost much more than expected. Even if I trust their expertise, I leave with a small doubt about the veracity of the problem they identified in addition to the uncertainty about the price.

In case we opt to repair the car through the assurance companies, the problem is the same but with a different cause. The assurance companies settle partnerships with several SME's with rappel discounts in exchange. This results in a quality decrease on the service provided by the auto repair garages, since the gains per each service are lower.

In addition to the problem affecting the assurance companies and SME's relationship, CARFIX identifies another one that affects Car reparation service providers. The big players such as Midas and Norauto are progressively stopping the clients' inflow for Small and Medium enterprises operating in this Market. Even if I find better quality in these SMEs the truth is that due to its greater Marketing power the big players are getting new clients every day. With the decrease of its cash inflow a SME will find it difficult to maintain the business.

2.5 Solution

These problems are an opened door for CARFIX. The market seeks transparency, fairness and better quality, CARFIX will guarantee the three.

The market seeks a better distribution of its consumers, CARFIX guarantees it.

The CARFIX platform will work has a "bridge" between clients and car reparation service providers. It is in the middle of this bridge that these problems will be solved. By registering on CARFIX either through his/her assurance or individually the client will have access to different budgets from different service providers for their car's problems based on an expert report. The client will choose the budget depending on the price, distance, time and expected service quality (according to the rate given by previous clients). A partnership with CARFIX, which is nothing more than giving up of a small commission per service provided, gives SMEs and others direct access to a non-limited number of potential clients and their information.

CARFIX will bring a fresh air to a market characterized by its uncertainty and unfairness and will be the first option for every car owner that gives money value and a cornerstone for SMEs.

2.6 Price

The company will not charge car owners for its services.

CARFIX' revenue will come from the following sources:

- **20%** commission charged to partners for every service provided using the platform;
- **Cost per view:** The platform will have ads from the partners who opt for this type of e-marketing. Every time an internet user opens the platform, he/she will see the ad displayed on the web page or app and CARFIX will charge 0,02€ per each page view.
- Data access:
 - 20-40 users' information → 3€ per unit;
 - 41-60 users' information → 2.50€ per unit;
 - 61< users' information → 2€ per unit;

2.7 Risks

I have identified three major risks

- Supply<Demand - there might be a lot of people excited about the concept. If when going to my platform the client realizes that the waiting time for the “budget auction” and/or for the service to be completed is taking longer than expected, perhaps I will lose a client.
 - Supply>Demand - this critical risk is similar to the first one, but it works on reverse. In this case I have more partners than clients. If my partners start to discredit my project due to the lack of costumers coming in through my platform, they will stop using my platform and I may lose them.
 - Tech problems – since the payments will be processed through a platform any tech problems that may occur may hardly affect the clients' trust since this is a new company. This risk will decrease as the time goes by. However, this risk will always be a concern;
- Diagnosis errors- it might happen that the technician in the diagnosis center do a mistake in assessing the car problem; This risk will always exist since it depends on humans.

2.8 Time to market

There will be five activities mainly responsible for us achieving a successful entry on the market:

- Online and social media presence since day 1 and generation of initial buzz.
- The development of a landing page where the first 200 registers will get a 10% discount on their first service.
- The marketing efforts to attract and create partnerships with car service providers to my platform in order to effectively respond to the demand's necessities (ANECRA).
- The development of a prototype Website to launch in the market as a minimum valuable service to a minor assurance company.
- The development of the fully functional Website with most of the functionalities I envision to have in my platform in order to achieve my value proposition. This will also incorporate feedback received from the users of the prototype version.
- To settle a partnership with a major assurance company to reach a bigger pool of users (car owners).

Furthermore, effective online presence is a high priority for CARFIX.COM. Even if the focus is the Portuguese market, yet the platform will give the option of choosing the platform interface language between Portuguese, for the convenience of locals, and English, French or Spanish for usability by foreigners that live in the country. Even the landing page will be multi-lingual. The underline philosophy is that the customers engage with the platform, feel and experience its transparency, and to provide the means to do so. Several potential customers will have enlisted themselves via the landing page to be notified when the Website launches. Social network presence is another way to keep in contact with customers, hear from them and keep them in the loop, and in the same time take best use of word of mouth and marketing to the users.

Once all the legal processes are successfully concluded and the company created, we will start working on a prototype for the Website to test the proof of concept. The proof of concept site will be launched in one month from the day we start working on it. It will have the barebones features of the site and aims to create connections with the end users and evaluate the features that would be desired by the followers.

Some partnerships will be done with auto garage service providers by this “prototype stage”. By the end of first month, after finalizing the system requirements according the users' feedback and interaction with the prototype, CARFIX.COM will develop its platform accordingly to higher standards.

At month four, the website must be fully functional for the user acceptance testing. In this stage, an assessment will take place to determine if the user requirements are met in the developed system. Following this stage, at second half of month four, the development team will focus on improving the site's auxiliary features, namely payment methods and other security aspects. This stage also encompasses the Alpha testing phase, in which the system will be tested by an independent test team at the developers' site. A soft-launch of the Beta system of CARFIX.COM is provisioned for the month 5 followed by launch of the fully functional platform with the specific features of CARFIX.COM shortly after (two weeks' time).

Early on the and along the system development phase, CARFIX.COM will follow a Demand Creation strategy to initiate anticipation for the final system launch. Specifically, since month 4, extra effort will be put in place in populating the platform by the different partners' listing. Also, at the end of month 6 initial marketing campaigns to attract more partners, but especially more registers, will be put in practice as further described in the marketing strategy. This will mark the beginning of the regular operations of CARFIX.COM in which marketing efforts and customer acquisition will have a very relevant role. The marketing expenditures will be a constant and will grow throughout the entire life of this venture.

The app development strategy consists on developing CARFIX.COM android app at month 9, and an iOS version at month 12. Android while having more than 81% market share is the dominant smart phone platform used by our target customers. By having both Android and iOS versions of CARFIX.COM I would cover more than 95% of smart phone users.

2.9 Market Description

Portugal has 10 325 452 habitants (INE, 2016) and more than 80% of these, are older than 20. On average families have 30.685,60€ per year, either to save or spend.

According to a research taken by *ACEPI and IDC* in 2016, 70% of the Portuguese population use the internet and it also previews an increase of 20 p.p. by 2020. This study suggests that only 30% of the population uses internet for e-commerce which is quite unpromising in comparison with other European countries. However, there's an expected increase of 2 times the actual percentage until 2025.

It is also interesting to mention the fact that, according to this study, the users have a preference on international websites which, in other words, means that Portuguese companies need to invest on their online presence in order to be relevant for consumers.

For the above-mentioned reasons, it is key for an online starting business to guarantee its functionality and that it fits costumers needs without any setbacks.

A deeper analysis on the auto repair market is key to better understand its real potential.

A total number of 4251 auto repair shops are operating in the Portuguese territory with a total turnover of 1 billion €, declared in 2016 (Sabi, 2017).

The market is separated by two types of services: In one hand, the car maintenance and in the other hand the car repairs.

The first type is commonly caused by car accidents which lead to the need of changing damaged pieces and more labour hours, thus a bigger service price.

The car maintenance usually takes place once or twice per year and it relates with wheels/oil/brakes/lights changing. The maintenance expenses are low in comparison with the ones caused by car accidents so, if auto repair service providers were to choose between the two, they would definitely opt by the first type as it leads to a greater revenue.

In 2016, the amount of car accidents registered in Portugal was 752.873 according to the yearly data provided by *ASF (Autoridade de Supervisão de Seguros e Fundos de Pensões)*. According to this source the car accidents' frequency is of 11.2% in a universe of 6.7M vehicles circulating.

The Portuguese law states that every car circulating is obliged to be insured, which leads us to how is the assurance market shared by the different operators. The biggest player is Fidelidade with 31.75% market share in the auto assurance sector, followed by UNIDAS, Allianz, Liberty Seguros, Occidental and Ageas with 6.68%, 6.42%, 2.97%, 2.63% and 2.38% market share, respectively.

In order to better understand the potential of this market, I conducted interviews in both sides (consumers and auto repair shops' managers).

Around 30 medium and mid-high-class car owners in Lisbon's area, were questioned about their satisfaction with the auto repair shops and in case they were not, why. There is a general dissatisfaction among the costumers. Some argue that the prices are unfair, others go deeper raising their suspicious on the problems' existence the mechanics find in their vehicles.

On auto repair shops' side, the case is not different. According to the research I've conducted through magazines and internet plus 5 interviews with different mechanics, auto repair shops are facing many barriers nowadays which puts their survival in risk. The first reason I was able to identify as mentioned is the lack of clients. Due to this first reason there is a second one which is their dependency on insurance companies to bring them clients. The problem with this dependency lies on the fact that this relationship between insurance companies is not healthy. Insurance companies want to pay these shops the minimum to guarantee a good margin and, on the other side, auto-repair shops are not able to provide car owners the best service and pieces

for the price they are receiving. Turns out that everybody is unhappy, however no one was able to find an alternative and led the things stay as they are.

The numbers above together with the research conducted on the field, suggest a huge dimension for a market where the general consumers do not find themselves satisfied. This is where the business opportunity lies. If a company manages to inspire trust and satisfaction within such a big market it is fair to preview a high probability of success.

2.10 Competition

2.10.1 Direct Competition

Considered as direct competition are any kind of online platform (Website or app) that somehow may be trying to democratize the automobile repair & maintenance market.

IZIREpair, implemented in 2017, is one of these online platforms. Startup Lisboa (2017) describe it as a car maintenance Marketplace, which allows customers to simulate instant quotes for their cars' services. Their dimension is still very small, nevertheless they have a great potential.

Three other companies were identified as potential direct competitors.

Whocanfixmycar.com is a platform launched in 2011 with the exact same business model as IZIREpair. However, they are only operating in the United Kingdom.

Mechalert, the Italian platform, is currently only present in the Italian market and they are still in funding stage. Their dimension is not so big that one could predict they would be ruling the European market in a few years. In addition, it is possible to identify two main differences between them and CARFIX's business model: Mechalert does not use a "budget competition" approach to match garages with customers and they are more focused in the periodical type of services (such as oil engine exchange, mandatory car inspection review, etc.).

RepairPal, is much larger and comprehensive, though it only operates in the American market for now. They were launched several years ago, and they are backed funded by some large companies such as Castrol and Cars.com. They have a big data and garage certification approach to the market.

2.10.2 Indirect Competition

There is one common element to all the types of indirect competitors identified, which is providing offline repair/maintenance services. In sum, they are all repair garages, but still it was possible to categorize them in three different groups.

1) Big Garages: Precision, Norauto, Midas and Bosh Car Service. These garages will less likely be willing to use CARFIX's platform at least in an initial phase. They have important resources and are more capable of attracting new customers in comparison with a garage of proximity.

2) The brand dedicated garages such as BMW Baviera, Mercedes repair, Fiat repair, and others. Usually these garages offer a premium service and may target customer that hardly uses their services. It is very unlikely that they will ever want to be present in the platform.

3) Garages of proximity (SMEs). Even though these garages are those targeted to be partnering with CARFIX, they can still be considered as competitors, because some clients will still use their services without booking through CARFIX's platform.

2.11 Potential Clients/Users

Every vehicle circulating in the Portuguese roads has to be covered by an assurance plan, therefore when there is a car accident the driver has two options: Either chooses to get the car fixed through the assurance company procedures, or individually.

In the first case scenario CARFIX would enter in a B2B business relationship as its potential clients would be the insurers.

In the second case scenario CARFIX would be operating in a B2C relationship as its clients would be the car owners.

It is key to identify the characteristics of the potential clients under these two types of business relationships so that the message is sent with the right content to the right receivers.

2.11.1 B2B

As per the above example all the potential clients falling into this type of relationship are organizations. These organizations can either be an insurer who find it valuable to use CARFIX services instead of their traditional procedures, or even a company whose core business is renting cars, or even one who provides them to its employees.

It might happen that under the case of assurance organizations, the car owners are the ones who end up paying for the repairs (depending on their assurance plan) but since they opted to go through the assurance procedures this will still be considered a B2B relationship.

2.11.2 B2C

According to INE and PORDATA (2016), there are 6.208,350 vehicles (vans, trucks and other heavy vehicles not included) circulating in Portugal.

From all of these car owners/users, the target customer is one that values not only the quality of the service but also the price and convenience.

Assuming that there's no car owner younger than 18 and, considering studies on the use of internet for e-commerce the target client/user will have the following characteristics:

- Living in Portugal;
- Older than 18;
- Car owner/user;
- Internet user (70% of the population);
- Lower middle class, middle-middle class and upper middle class;

2.12 Market Communication

The following marketing strategy aims to promote all the key benefits from both CARFIX value proposition and the solution a platform like this gives to CARFIX targeted customers' problem. It is key to promote the solution itself instead of just the value proposition because CARFIX is entering a market with direct competitors, and with lots of potential to be explored, thus it is not only important to sell its services but also the concept. Hence, all marketing actions will have to promote at least one of the following:

- Lower prices
- Security and peace of mind attained by using the platform – solving the transparency issue
- User friendliness and lean design of the platform
- Convenience of the platform
- Special features it will have

In year 1, until month six, marketing actions will be mainly focused in attracting car service providers to the platform, so that CARFIX can enlarge its capacity responding to demand's

necessities. In order to do so car service providers' associations will be directly approached with all the reunited data about the partnership pros.

From month seven until the end of the year, CARFIX will keep the same marketing expenditures with car service providers, but the focus will shift towards car assurance companies. By signing a partnership with one insurance company CARFIX guarantees a reasonable pool of users for its platform and another source of marketing which will be for free, Word of Mouth. The auto repair is considered to be a traditional sector where its players (insurance companies included) are resistant to changes. Therefore, CARFIX will identify the insurance company which is, *a priori*, more opened to introduce this service within their insurance plans. This insurance company has to be preferably one of low market share as this will be a market trial, a proof of concept.

In year 2, after a results assessment, the goal is to settle a partnership with the biggest insurance player, Fidelidade. With a given proof that the concept works, CARFIX will have a strong basis to communicate and convince this organization to incorporate the platform in their services.

With the strategy of settling partnerships with insurance company, CARFIX will be indirectly communicating with the final consumer as the users coming from the insurance companies will share their experience with friends and family who will potentially sign up on the platform. This will generate a buzz for which CARFIX didn't spend any euro (directly).

For digital communication with potential consumers, it will use mainly Google ad words, Facebook ads, social media (using posts and memes) and other ads in websites with relevant target audience.

The brand will be present in some fairs and events and will be as much present as possible in the media.

2.12.1 Segmentation

Since there will be two types of communication, one to potential partners and other to potential users, it is key to divide these in groups, so that the message is effective.

As potential partners, operating in the auto sector, two groups are identified:

- 1- Every entity or groups of entities who bring auto repair shops into the game. It can either be a single SME or an association like ANECRA, for example. These are not just potential partners these need to be considered as key partners as without them there is no bridge to be established and CARFIX won't be able to offer a sustainable solution;

- 2- Every entity who brings CARFIX users. These can either be assurance companies, car renting companies or any other company/organization who has a car fleet and wants to use CARFIX whenever there is an accident, instead of going through their insurance plan procedures. This might be quite uncommon, but it is possible, so it needs to be taken into consideration.

As potential users, in Portugal, several groups are identified with the following characteristics combined between themselves:

- 1- Car owners;
 - 1.1- 18 or older than 18 and younger than 30, mainly students or young people who do not have total monetary independence;
 - 1.2- 30 to 50 years old, mainly people who are workers and constituted their families, most of them are busier;
 - 1.3- 50 to 60 years old, people who are in the late stage of their professional careers, who are potentially more stabilized, financially speaking;
 - 1.4- 60 and older, people who are retired or about to be, financially stable and with a relaxed schedule;
- 2- Gentleman- Who potentially are more interested in mechanical engineering and cars;
- 3- Ladies- Who contrary to man are less interested on this subject;
- 4- Wealth- Deducted by the user cars' brand/model;
 - 4.1- Luxury cars' owners (BMW, Ferrari, Porsche, Mercedes, Audi, Jaguar and others) who are particularly interested on the quality of the service;
 - 4.2- Average cars' owners, who value the price vs quality relation;

2.12.2 Target

From the possible groups above, the most attractive are the ones composed by both ladies and gentlemen, who are average cars' owners and aged between 18 and 60 years old. The reason behind this attractiveness relies on two facts. First, these groups represent the majority of the car owners in Portugal. Second, luxury cars' owners tend to prefer their branded auto repair shops meaning, a Mercedes car owner usually opts for Mercedes auto repair shops, who will not be part of the targeted partners.

2.12.3 Positioning

Kawasaki (2004) suggests that “the art of positioning really comes down to nothing more than answering that one simple question: What do you do?”.

For the auto repair shops’ perspective, CARFIX is an enormous source of clients for Small and Medium auto repair shops.

For the assurance companies’ perspective, CARFIX is a huge improvement in customer experience and a powerful cost-cutter.

For the final costumers’ perspective, CARFIX is the car owners’ best friend by showing them where to get the best services for the best prices.

These three quotes are the key messages that CARFIX wants to share with its potential partners and users, respectively.

This company wants to bring transparency to a market characterized by the lack of information sharing and “dark” prices. It will bring fairness and transparency into a sector where the clients do not have the necessary knowledge to judge whether a price is fair or not and if the service was good in terms of quality.

CARFIX is the light at the end of the tunnel for all these, auto repair shops, assurance companies and car owners.

2.13 Strategic Goals

2.13.1 Business Goals

To prove the concept – To have 100 registered users in the landing page one month after its launch. After the first month, have at least five partnerships signed with SMEs in Lisbon.

Fund raising – Option 1: To find investors who will cover at least 70% of the initial investment. These might be business angels, micro-credit loans, start-up programs or other private investors. Option 2: Develop the business idea “under the umbrella” of an established brand/company of the sector taking royalties as counterpart.

To launch the beta version – To finish both the platform and apps (IOS and Android) beta versions, and launch it in the market, so that clients can test it.

Satisfaction rating – To have at least 4 points out 5 in the satisfaction rating of its users.

To launch the final version – To finish the platform and apps’ design and launch the final versions.

Breakeven – To reach the breakeven.

2.13.2 Qualitative and Quantitative goals

As per the message CARFIX will send to its potential users and potential partners, it will be a bridge connecting both players. The main goal is to have this bridge fully operational.

To make it happen, it is key to have users in order to find partners and it is also key to have partners to attract users.

Considering the main goal there are several strategic goals both in a short-term and long-term period.

Short-Term

- To find a co-founder/partner with mechanical engineering expertise;
- To register the name of the company;
- To buy the domain;
- To launch a landing page within 2 months;

From the users' view point:

- To have 200 registered users in the landing page;

From the partners' view point:

- To sign partnerships with five auto repair shops in Lisbon (minimum);

To launch the final platform and the application both in IOS and Android

Long-Term

From the users' view point:

- To have at least 15% of the car owners in Portugal registered in the platform;
- Satisfaction rating at level 4 out of 5;
- A maximum of 10% of the services with registered issues;
- 3M likes on the Facebook page and 3M followers on Instagram (minimum);
- To have, on average, a revenue of 100€ per year and per user;

From the partners' view point:

- To have all the national small and medium size auto repair shops as partners;
- An internal rating of satisfaction (among the partners) of 4.6 out of 5;
- To offer other services as market exposure and marketing communication tools;

2.14 Marketing Mix

2.14.1 Services

CARFIX will be providing two different services each one to different costumers. This multi-sided platform will have in one hand the consumers (car owners) and in the other hand, the partners (auto repair shops). The business is all about the connection between both “hands”.

CARFIX will provide the following services to car owners:

- Free diagnosis;
- Accessibility everywhere;
- Information (prices, rating, time, and distance) and service booking from auto repair shops willing to repair their cars according to the diagnosis made at CARFIX’s garage;
- Service budget competition between auto repair shops by offering budgets considering others’ offers;

CARFIX will provide the following services to its partners:

- Clients inflow - CARFIX partners will have access to millions of potential clients all around the country;
- Market exposure by means of advertisement in the platform – an online platform with millions of users (car owners) is the perfect show room for auto repair shops who want to send a message to its target;
- Data base – In case of acceptance of contact information sharing by its users, CARFIX will sell this data to its partners for marketing purposes;
- Service quality assessment and correspondent certificate;

2.14.2 Place

The first contact users will have with CARFIX takes place whether on the website or the application (IOS or Android). These are the distribution channels, CARFIX will be in everyone’s pockets (smartphones or tablets) and bags (computers).

The physical presence which is the second contact users have is in one of the diagnosis garages, where the mechanic will identify the car issues and launch a pending reparation to every partner within a limited area.

2.14.3 Promotion

1) WOM (Word of Mouth)

Research by Trusov (2009) has provided evidence that WOM is a key success factor for companies seeking new customers and have larger and longer-lasting effects than the traditional marketing means.

CARFIX is a start-up company, its budget is already small when compared to already settled businesses. The effectiveness of its communication it's key and, in a world where the consumer behavior is influenced by others, the "WOM system" appears to be critical within such marketing strategy.

Due to budget constraints, it is inviable to have hundreds of spoke-persons spreading the message. The best way to have these hundreds of messengers is by using the recommendation bonus for users. For every first 200€ a user spends through CARFIX.COM his/her recommender gets 10% discount in his/her next service request.

2) Social Media & Ads

In an Era when almost everyone has a smartphone and use frequently social networks such are the Facebook, Instagram and Twitter, an online business must be present in these communication vehicles.

Through both Facebook and Instagram ads, CARFIX can send its message directly to its targeted audience with more efficiency and lower costs than simply going to the streets giving flyers that no one reads. Based on the cookies in everyone's personal computers or smartphones, CARFIX ads will appear on the screen of its potential customers showing them the solution they were previously searching for whether on google or on another search engine. Adding to these ads, it is key to have the "sponsor" of social media influencers. The daily use of these social networks by the population created the "influencers", people who are followed by thousands of admirers (of their beauty or professional success) and who have an influence on their decisions.

Twitter will have a different role, will be a mean of public announcements or other important messages other than "selling" CARFIX attributes and advantages.

As another source of new users' exposure, the company will use Google Ad words, its cost is based on the clicks it generates (CPC- Cost Per Click).

3) Offline

Considering the fact that this platform is bringing online a traditional sector this transition must be smooth thus, the offline communication also plays an important role in this marketing strategy.

An approach to organizations who are exposed to CARFIX's targeted audience, such as insurance companies and second-hand car retailers, might be effective since their clients (car owners) are potential users. As per the above-mentioned approach, the presence in some fairs and events related with the car sector are also key to show, the automobile world, the platform's existence.

2.15 Intellectual Property

Core technologies of *CARFIX* portal along with its unique specificities are important driving forces of its successful operation. At *CARFIX* we understand the value of Intellectual Property (IP) and have strategies in place for protecting Intellectual Property Rights (IPR). Capitalizing on our IPR, we aim to: Keep our competitors at bay and develop better relationships with our employees, consultants, subcontractors, investors, business partners and customers. We take the following actions in regard with our IP strategy:

CARFIX.com domain name is registered, and we own the exclusive right to use it. *CARFIX* logo and brand will be registered and trademarked. Our database, which includes our listed items, and our customer lists among others, is valuable IP asset and will be protected by Sui Generis database right under EU Database Directive for 15 years. Website and app design elements will be covered by the Registered Community Design (RCD) which offers protection in complete EU region in a cost-effective way. Front-end HTML and CSS design is protected by Copyright. Part of the source code of the system, databases and algorithms will be kept as trade secrets. Work-for-hire and employment agreements will ensure the work done for the company is owned by the company. Users of the platform are required to accept *CARFIX* agreement, which states they transfer the right of sharing information about the vehicle they own and their preferences.

2.16 Financial Forecasts

The following financial statements, mentioning forecasted revenues and expenses, are important tools that give readers a better picture of what this project can achieve in the future.

2.16.1 Assumptions

In order to produce this forecast, several assumptions were considered:

- 1) Type of services:
 - A) Service A (car owners): Basic maintenance services (oil, check-up, official periodic inspection and others);
 - B) Service B (car owners): Wheels change and “complex” fix services (engine, clutch and others);
 - C) Service C (partners): Ads in CARFIX.COM and other marketing add-ons;
- 2) Price:
 - A) Service A and B: The price is the total price car owners pay (CARFIX commission included);
 - B) Service C: The price paid by partners who signed up for this online marketing service;
- 3) Price (amount):
 - A) Service A: 120€
 - B) Service B: 398,34€
 - C) Service C: 0,02€ per page view
- 4) 80% of what car owners pay is given to CARFIX partners, (auto- repair service providers) and are considered as variable costs;
- 5) N° Car owners:
 - A) Portugal: 6.095,470 (Pordata)
 - B) Lisboa + Amadora (6,6%): 402,301
 - C) Sintra (3,7%): 226,108
 - D) Almada (1,6%): 99,966
- 6) Only 30% of the residents do shopping online
- 7) Market Share

Market Share						
Total Qt. x 30% e-commerce	Year 1	Year 2	Year 3	Year 4	Year 5	
Lisboa +Amadora	120690	1%	1,20%	1,44%	1,73%	2,07%
Sintra	67832	0	1%	1,20%	1,44%	1,73%
Almada	29990	0	0	1%	1,20%	1,44%

Quantity Service A+B					
	Year 1	Year 2	Year 3	Year 4	Year 5
Lisboa+Amadora	1207	1448	1738	2086	2503
Sintra	0	678	814	977	1172
Almada	0	0	300	360	432
Total /Year	1207	2127	2852	3422	4107
Total / Month	101	177	238	285	342

2.16.2 Revenues

The revenues forecasted do not take into consideration the cost of 80% that is due to the partners. These are the revenues the platform will generate in total.

As per the assumptions service A is the one that includes basic service interventions, on average it takes place once per year similarly to what happens with service B.

Service B includes interventions with more complexity with a higher average price.

Service	Year 1	Year 2	Year 3	Year 4	Year 5
A	144 828 €	255 193 €	342 219 €	410 663 €	492 796 €
B	480 758 €	847 113 €	1 135 997 €	1 363 196 €	1 635 835 €
C (Marketing Ads)	1 448 €	2 552 €	3 422 €	4 107 €	4 928 €
Total	627 034 €	1 104 858 €	1 481 638 €	1 777 966 €	2 133 559 €

2.16.3 Expenses

2.16.3.1 Variable Costs

As the name suggests variable costs include all the costs CARFIX will incur for each unit of service provided, its value depends on the amount of money flowing from the car owner to the platform and from the platform to its partners.

The variable costs are essentially composed by the 80% commission due to the partners plus the commissions CARFIX need to pay for each cash flow either from users' payments and bank transfers to partners.

Variable Costs	Year 1	Year 2	Year 3	Year 4	Year 5
Received Payment Commission	14 146 €	24 926 €	33 426 €	40 111 €	48 134 €
Partners' Commission	500 469 €	881 845 €	1 182 573 €	1 419 087 €	1 702 905 €
Bank transfers' commission	20 019 €	35 274 €	47 303 €	56 763 €	68 116 €
Total	534 634 €	661 942 044 €	1 263 302 €	1 515 962 €	1 819 155 €

2.16.3.2 Fixed Costs

2.16.3.2.1 Salaries

The fixed costs will increase proportionally to the market share of CARFIX.

In the first year there will be only one diagnosis center serving Lisboa+Amadora. In the following years there is an expected rise in the market share which will necessarily be followed by an increase in the number of employees, diagnosis center and partnerships.

This increase in the market share will be followed by a rise in the operating area. In the second year CARFIX will have a diagnosis center in Sintra. By having one center in Lisbon and another one in Sintra, Oeiras will be at a half way, increasing the platform's market exposure.

In the third year, it is expected to open a new center in Almada.

Expected number of diagnosis centers:

- Year 1: 1 diagnosis center;
- Year 2: 2 diagnosis centers;
- Year 3: 3 diagnosis centers;
- Year 4: 4 diagnosis centers;
- Year 5: 5 diagnosis centers;

Expected number of employees (founders included):

- Year 1: 3 employees;
- Year 2: 4 employees;
- Year 3: 6 employees;
- Year 4: 8 employees;
- Year 5: 10 employees;

<u>Salaries</u>		12 n° of operating months in year 1				
N° Months		12	14	14	14	14
Annual Increase (Salaries + Lunch Sub.)		0%	3,10%	3,10%	3,10%	3,10%
<u>Personnel</u>	-	Year 1	Year 2	Year 3	Year 4	Year 5
Administration / Directors		2	2	2	2	2
Commercial / Marketing		0	0	1	1	2
Operational (Mechanics)		1	2	3	5	6
TOTAL		3	4	6	8	10
<u>Gross Remuneration</u>	-	Year 1	Year 2	Year 3	Year 4	Year 5
Administration / Directors		600 €	800 €	1 000 €	1 300 €	1 300 €
Commercial / Marketing		- €	- €	800 €	800 €	900 €
Operational (Mechanics)		600 €	800 €	800 €	900 €	900 €
<u>Annual Gross Remuneration</u>	-					
<u>TOTAL</u>	-	Year 1	Year 2	Year 3	Year 4	Year 5
Administration / Directors		14 400 €	23 094 €	29 763 €	39 891 €	41 128 €
Commercial / Marketing		- €	- €	11 905 €	12 274 €	28 473 €
Operational (Mechanics)		7 200 €	23 094 €	35 715 €	69 043 €	85 419 €
TOTAL		21 600 €	46 189 €	77 384 €	121 208 €	155 020 €
<u>Other Personnel Costs</u>	-	Year 1	Year 2	Year 3	Year 4	Year 5
Social Security						
Administration / Directors	23,75%	3 420 €	5 485 €	7 069 €	9 474 €	9 768 €
Personnel	23,75%	1 710 €	5 485 €	11 310 €	19 313 €	27 049 €
Work accidents' insurance	1%	216 €	462 €	774 €	1 212 €	1 550 €
Lunch subsidies / day	4,27 €	3 100 €	4 261 €	6 392 €	8 523 €	10 654 €
TOTAL OTHER PERSONNEL COSTS		8 446 €	15 693 €	25 545 €	38 522 €	49 021 €
TOTAL SALARIES		30 046 €	61 882 €	102 928 €	159 730 €	204 042 €

From the expected numbers of employees and founders shown above, I have assumed that the salaries will increase proportionally to the inflation (3,10%). As I consider the business survival the key priority for its founders, the correspondent salaries will not be greater than the amount received by the mechanics in the first two years of operations (600€ in year 1 and 800€ in year 2). While the business grows its personnel will grow too, in salaries, number and new positions, with the inclusion of commercials and marketing workers. When estimating the total cost with salaries I took into consideration the Portuguese taxes due to social security and all the legal requisites related with the personnel such are the lunch subsidies of 4,27€ and the work accidents' insurance that will be 1% of the gross salaries.

2.16.3.2.2 Other operating costs

As part of the fixed costs, I included all the costs related with the diagnosis centers as it will be demonstrated and described in the next table and also other costs related with the provision of external services.

External Services (cost per month without VAT)	Year 1	Year 2	Year 3	Year 4	Year 5
Accounting	125 €	125 €	125 €	125 €	125 €
Paper and other office materials	38 €	76 €	114 €	152 €	152 €
Security alarms	30 €	60 €	90 €	120 €	120 €
Garage Rent	600 €	1 200 €	2 100 €	2 400 €	2 700 €
Water and other energy costs	115 €	230 €	344 €	459 €	459 €
Oil (transportations)	100 €	100 €	200 €	300 €	400 €
Communications	75 €	150 €	224 €	299 €	299 €
Travel expenses	100 €	100 €	200 €	300 €	400 €
Advertising	79 €	276 €	417 €	417 €	417 €
Insurance Costs	400 €	600 €	800 €	1 000 €	1 200 €
Legal costs	30 €	- €	- €	- €	- €
Web platform location costs	7 €	7 €	7 €	7 €	7 €
TOTAL EXTERNAL SERVICES / MONTH	1 699 €	2 924 €	4 622 €	5 580 €	6 280 €

All the monthly costs described above were based on prices present in the market from the various service providers. For the first five years of operations, since this is a start-up, I considered less risky to pay an external accountant than hiring one, due to all the costs related with this second option.

It is important to emphasize the two costs that have a greater weight in these expenses.

First, the garage rent as to do with the diagnosis centers which are key to CARFIX operations and the need to have reasonable place to conduct the reports by my professionals.

Second, the insurance costs related to all the materials and assets present in our centers added to all other responsibilities CARFIX will have while performing its activity. This amount is in line with the prices practiced by *AGEAS Seguros*, one of the biggest insurance companies in Portugal.

Adding up to the above explanations, the amounts shown are not including VAT which will be deducted from the tax CARFIX will charge its clients.

FSE Total Annual	Year 1	Year 2	Year 3	Year 4	Year 5
Accounting	1 500 €	1 500 €	1 500 €	1 500 €	1 500 €
Paper and other office materials	457 €	914 €	1 371 €	1 828 €	1 828 €
Security alarms	360 €	720 €	1 080 €	1 440 €	1 440 €
Garage Rent	7 200 €	14 400 €	25 200 €	28 800 €	32 400 €
Water and other energy costs	1 378 €	2 755 €	4 133 €	5 510 €	5 510 €
Oil (transportations)	1 200 €	1 200 €	2 400 €	3 600 €	4 800 €
Communications	898 €	1 795 €	2 693 €	3 590 €	3 590 €
Travel expenses	1 200 €	1 200 €	2 400 €	3 600 €	4 800 €
Advertising	950 €	3 314 €	5 000 €	5 000 €	5 000 €
Insurance Costs	4 800 €	7 200 €	9 600 €	12 000 €	14 400 €
Legal costs	360 €	- €	- €	- €	- €
Web platform location costs	88 €	88 €	88 €	88 €	88 €
TOTAL EXTERNAL SERVICES / YEAR	20 390€	35 086 €	55 464 €	66 957 €	75 357 €
Deductable VAT	3 690 €	8 070 €	12 757 €	15 400 €	17 332 €

2.16.4 Income Statement

CARFIX.Com	Year 1	Year 2	Year 3	Year 4	Year 5
Turnover	627 034 €	1 104 858 €	1 481 638 €	1 777 966 €	2 133 559 €
Costs					
Costs of goods/services sold	534 634 €	942 044 €	1 263 302 €	1 515 962 €	1 819 155 €
Other operating expenses	20 390 €	35 086 €	55 464 €	66 957 €	75 357 €
Salaries	30 046 €	61 882 €	102 928 €	159 730 €	204 042 €
Total operating costs	585 070 €	1 039 013 €	1 421 695 €	1 742 649 €	2 098 553 €
EBITDA	41 964 €	65 845 €	59 944 €	35 317 €	35 006 €
Amortization/Depreciation	20 276 €	22 114 €	24 152 €	6 209 €	3 055 €
EBIT	21 688 €	43 731 €	35 792 €	29 108 €	31 951 €
EBT	21 688 €	43 731 €	35 792 €	29 108 €	31 951 €
Taxes	19%	4 121 €	8 309 €	6 800 €	5 530 €
Net income	17 567 €	35 422 €	28 991 €	23 577 €	25 881 €

The net income is expected to face a growth each year. This growth will be a consequence of the brand awareness leading to an increase both in number of clients and partners.

A growth in sales has to be followed by a growth in capacity to respond to the increasing number of clients thus, the expenses related to the facilities and partnerships will rise accordingly.

2.16.5 Investments

Investment / Year	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Fixed Tangible Assets						
Technology equipment (Printers, calculators)		1 600 €	2 600 €	3 500 €	3 500 €	3 500 €
Furniture	1 216 €	1 216 €	1 216 €	1 216 €	- €	- €
Alarms		500 €	500 €	500 €	500 €	- €
Mechanical machines and tools	- €	5 000 €	5 000 €	5 000 €	5 000 €	- €
Total Fixed Tangible Assets	1 216 €	8 316 €	9 316 €	10 216 €	9 000 €	3 500 €
Intangible Assets						
Logo Project	300 €	- €	- €	- €	- €	- €
Billing software and Web&App development	60 000 €	60 €	60 €	60 €	60 €	60 €
Total Fixed Assets	60 300 €	60 €	60 €	60 €	60 €	60 €
Total Investment	61 516 €	8 376 €	9 376 €	10 276 €	9 060 €	3 560 €

Year 0 will be the one with bigger investment. As an online company the biggest pie of the initial investment will go directly to the web platform and app development, 60.000€ was the best offer (LCG company based in Lisbon) among various proposals. Since the functionality and design of both platform and app, is a key success factor to attain users' satisfaction, this has to be developed by professionals with experience who guarantee excellence in their services. The other investments described above, from furniture to technology equipment and mechanical tools were estimated based on prices of shops such IKEA, Worten and OLX (for second-handed car elevators), respectively. A billing software of 60€ per year, is also necessary to generate the invoices and receipts to our partners.

2.16.6 Financing Required

2.16.6.1 Cash-Flow Statement

Project Cash-Flow	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	
Operating Cash-Flow		54 268 €	75 448 €	72 706 €	34 816 €	31 409 €	249 281 €
Fixed Assets Investment	61 516 €	8 376 €	9 376 €	10 276 €	9 060 €	3 560 €	- 35 159 €
Working-Capital							
Investment	16 098 €	6 453 €	23 513 €	11 844 €	30 135 €	30 135 €	- 118 179 €
Total Investment	77 614 €	14 829 €	32 889 €	22 120 €	39 195 €	33 695 €	83 020 €
Total Cash-Flow	-77 614 €	39 438 €	42 559 €	50 586 €	- 4 378 €	- 2 285 €	332 300 €
Accumulated Cash-Flow	-77 614 €	- 38 176 €	4 384 €	54 970 €	50 591 €	48 306 €	380 606 €

In order to implement this business idea, it is required a funding amount of **77.614 euros**.

This amount equals the maximum negative accrued cash-flow throughout the first 5 years as observable in the cash-flow statement.

The biggest pie of this amount corresponds to the web developer payment and all the costs that are related with both platform and apps development. The biggest asset of this project will be the functionality of the platform, it is key that this is developed by professionals that are able to reduce the chances of online failures.

The other, but not so big, pie corresponds to the machines and technology that need to exist in the diagnosis centers so that our professionals are able to make a reliable and precise assessment of the cars' problems.

Unlike what happens with the platform investment the machines and technology investments will take place more than once, as CARFIX will increase the number and size of its facilities in order to respond to the rise on the demand.

2.16.6.2 Net Present Value and Internal Rate of Return

In order to understand the potential of CARFIX I will provide three possible results for these two indicators (Net Present Value and Internal Rate of Return), after it has been implemented. First, I will provide a pessimistic prediction which is a result of only 10% growth in market share per year. Note for the fact that it has been predicted only 1% market share in Lisbon in the first year, which is already a pessimistic prediction.

Secondly, I will provide a realistic prediction which is based on the results presented in the previous topics of this chapter.

Thirdly, I will provide an optimistic prediction which is a result of a 50% growth in market share per year.

A discounted rate of 13% was considered to assess the two indicators. This number is a result of the Portuguese government bonds' interest rate (T1) of 3,1% in 2018 plus the inflation rate (T3) of 1,2% and the Portuguese market risk premium (T2) of 7,96% (*Damodaran*).

By recurring to the numbers above and including them in the following formula discounted rate= $[(1+T1) \times (1+T2) \times (1+T3)] - 1$, the outcome is the 13%.

2.16.6.2.1 Pessimistic prospects

Project Cash-Flow	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	
Operating Cash-Flow		54 268 €	71 706 €	61 808 €	13 441 €	- 3 783 €	- 30 022 €
Fixed Assets Investment	61 516 €	8 376 €	9 376 €	10 276 €	9 060 €	3 560 €	- 35 159 €
Working Capital							
Investment	16 098 €	5 817 €	22 296 €	9 426 €	26 568 €	26 568 €	- 106 772 €
Total Investment	77 614 €	14 193 €	31 672 €	19 702 €	35 627 €	30 127 €	71 614 €
Total Cash-Flow	-77 614 €	40 075 €	40 034 €	42 107 €	- 22 186 €	- 33 910 €	41 592 €
<i>Accumulated Cash-Flow</i>	<i>-77 614 €</i>	<i>- 37 539 €</i>	<i>2 495 €</i>	<i>44 602 €</i>	<i>22 416 €</i>	<i>- 11 495 €</i>	<i>30 097 €</i>

IRR: 17,9%

NPV: 6 918€

2.16.6.2.2 Realistic prospects

Project Cash-Flow	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	
Operating Cash-Flow		54 268 €	75 448 €	72 706 €	34 816 €	31 409 €	249 281 €
Fixed Assets Investment	61 516 €	8 376 €	9 376 €	10 276 €	9 060 €	3 560 €	- 35 159 €
Working-Capital							
Investment	16 098 €	6 453 €	23 513 €	11 844 €	30 135 €	30 135 €	- 118 179 €
Total Investment	77 614 €	14 829 €	32 889 €	22 120 €	39 195 €	33 695 €	83 020 €
Total Cash-Flow	- 77 614 €	39 438 €	42 559 €	50 586 €	- 4 378 €	- 2 285 €	332 300 €
<i>Accumulated Cash-Flow</i>	<i>-77 614 €</i>	<i>- 38 176 €</i>	<i>4 384 €</i>	<i>54 970 €</i>	<i>50 591 €</i>	<i>48 306 €</i>	<i>380 606 €</i>

IRR: 56,4%

NPV:185 468€

2.16.6.2.3 Optimistic prospects

Project Cash-Flow	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	
Operating Cash-Flow		54 268 €	79 191 €	83 978 €	57 748 €	70 686 €	560 999 €
Fixed Assets Investment	61 516 €	8 376 €	9 376 €	10 276 €	9 060 €	3 560 €	- 35 159 €
Working-Capital							
Investment	16 098 €	7 090 €	24 794 €	14 464 €	34 195 €	34 195 €	- 130 836 €
Total Investment	77 614 €	15 466 €	34 170 €	24 740 €	43 255 €	37 755 €	95 678 €
Total Cash-Flow	- 77 614 €	38 802 €	45 021 €	59 238 €	14 493 €	32 931 €	656 676 €
<i>Accumulated Cash-Flow</i>	<i>-77 614 €</i>	<i>- 38 812 €</i>	<i>6 209 €</i>	<i>65 447 €</i>	<i>79 940 €</i>	<i>112 871 €</i>	<i>769 547 €</i>

IRR: 72,7%

NPV: 383 255€

2.16.6.3 CARFIX Viability

As it was demonstrated, regardless of the sales growth rate to be only 15% or 20% the net present value is still positive at a discounted rate of 13%. In other words, CARFIX is a profitable investment. When assessing the viability of this project I assumed pessimistic numbers such the market share of only 1% in Lisbon, which I strongly believe that will not be the case. This is an internet-based company, the growth it will face will have nothing to do with the 1% market share considered or even with any of the growth rates considered in the prospects presented.

For all the above numbers and statements presented, theoretically this is a viable project and with an investment of 77.614€ it will be implemented and generate value to both its stakeholders and shareholders.

2.17 Traction

The CARFIX project is the result of the entrepreneurial mentality of its founder. Graduated, finishing the master's degree added to two years of international working experience, I have the keen to create something new and add value to the society. Having experienced the lack of transparency and fairness in the Car service sector I found it the best opportunity to create my own company.

During the last month, I have been approaching the targeted costumers to understand if this is a common problem and the conclusion is that this business idea will be well accepted and a breath of fresh air. However, I believe that mentoring will be a cornerstone in order to successfully implement CARFIX.

This is why I took the opportunity to do this project development as part of my master thesis which gives me the opportunity to be mentored by two people who have experience in the theoretical field and business practices with special mention to the entrepreneurial business environment. The inputs from both mentors are key to increase the chances of turning this project into a successful business.

3. References

1.3 Books

Ebert, R. J., & Griffin, R. W. 2017. *Business essentials, 11th edition*. New York: Pearson

Evanschitzky, H., & Iyer, G. R. 2007. *E-services: Opportunities and threats*. Frankfurt: Gabler Edition Wissenschaft.

Schaper, M., Volery, T., Weber, P., & Gibson, B. 2014. *Entrepreneurship and small business: A pacific rim perspective (4th edn)*. Milton: John Wiley & Sons.

Schwetje, G., & Vaseghi, S. 2007. *The business plan: How to win your investors' confidence*. New York: Springer.

1.4 Journals

Ajzen, I. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2): 179-211.

Alsos, G. A., & Ljunggren, E. 2017. The role of gender in entrepreneur–investor relationships: A signaling theory approach. *Entrepreneurship Theory and Practice*, 41(4): 567-590.

Anderson, A. R., & Starnawska, M. 2008. Research practices in entrepreneurship: Problems of definition, description and meaning. *Entrepreneurship and Innovation*, 9(4): 221-230.

Baye, M. R., & Morgan, J. 2001. Information gatekeepers on the internet and the competitiveness of homogeneous product markets. *American Economic Review*, 91(3): 454-474.

Bönte, W., Procher, V. D., & Urbig, D. 2016. Biology and selection into entrepreneurship: The relevance of prenatal testosterone exposure. *Entrepreneurship Theory and Practice*, 40(5): 1121-1148.

Choi, Y. R., Lévesque, M., & Shepherd, D. A. 2008. When should entrepreneurs expedite or delay opportunity exploitation? *Journal of Business Venturing*, 23(3): 333–355.

Edelman, B., Jaffe, S., & Kominers, S. D. 2016. Togroupon or not togroupon: The profitability of deep discounts. *Marketing Letters*, 27(1): 39-53.

Entrialgo, M., & Iglesias, V. 2017. Are the intentions to entrepreneurship of men and women shaped differently? The impact of entrepreneurial role-model exposure and entrepreneurship education. *Entrepreneurship Research Journal*, 8(1), 1-14.

- Foer, A. A. 2016. A vocabulary for conversing about entrepreneurship, innovation, and antitrust. *The Antitrust Bulletin*, 61(4): 479-493
- Javalgi, R. G., Martin, C. L., & Todd, P. R. 2004. The export of e-services in the age of technology transformation: Challenges and implications for international service providers. *Journal of Services Marketing*, 18(7): 560-573.
- Karat, C., Karat, J., Vergo, J., Pinhanez, C., Riecken, D., & Cofino, T. 2002. That's entertainment! Designing streaming, multimedia web experiences. *International Journal of Human-Computer Interaction*, 14(3): 369-384.
- Kim, H., Lee, D., & Hwang, J. 2018. The effect of online platform maturity on the efficiency of offline industry. *Telematics and Informatics*, 35: 114-121.
- Kornish, L., & Ulrich, K.T. 2014. The importance of the raw idea in innovation: Testing the sow's ear hypothesis. *Journal of Marketing Research*, 51(1): 14-26.
- Kotha, S., Rajgopal, S., & Venkatachalam, M. 2004. The role of online buying experience as a competitive advantage: Evidence from third-party ratings for e-commerce firms. *Journal of Business*, 77(2): 109-133.
- Kvasnicova, T., Kremenova, I., & Fabus, J. 2016. From an analysis of e-services definitions and classifications to the proposal of new e-service classification. *Procedia Economics and Finance*, 39: 192-196.
- Lichtenstein, B. 2016. Emergence and emergents in entrepreneurship: Complexity science insights into new venture creation. *Entrepreneurship Research Journal*, 6(1): 43-52.
- Marlow, S., & Patton, D. 2005. All credit to men? Entrepreneurship, finance, and gender. *Entrepreneurship Theory and Practice*, 29(6): 717-735.
- McKelvey, B. 2015. Complexity ingredients required for entrepreneurial success. *Entrepreneurship Research Journal*, 6(1): 53-73.
- Mishra, C. S., & Zachary, R. M. 2015. The theory of entrepreneurship. *Entrepreneurship Research Journal*, 5(4): 251-268.

- Murphy, P. J., Kickul, J., Barbosa, S. D., & Titus, L. 2007. Expert capital and perceived legitimacy: Female-run entrepreneurial venture signaling and performance. *Entrepreneurship and Innovation*, 8(2): 127-138.
- Rust, R. T., & Lemon, K. N. 2001. E-service and the consumer. *International Journal of Electronic Commerce*, 5(3): 85-101.
- Schneider, T. W. 1998. Building a business plan. *Journal of Property Management*, 63(6).
- Shane, S., & Vankataraman, S. 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1): 217-226.
- Sousa, R., & Voss, C. 2012. The impacts of e-service quality on customer behavior in multi-channel e-services. *Total Quality Management*, 23(7): 789-806.
- Sullivan, D. M., & Meek, W. R. 2012. Gender and entrepreneurship: A review and process model. *Journal of Managerial Psychology*, 27(5): 428-458.
- Taherdoost, H., Sahibuddin, S., & Jalaliyoon, N. 2015. A review paper on e-service: Technology concepts. *Procedia Technology*, 19: 1067-1074.
- Thébaud, S. 2015. Business as plan b: Institutional foundations of gender inequality in entrepreneurship across 24 industrialized countries. *Administrative Science Quarterly*, 60(4): 671-711.
- Vogel, P. 2017. From Venture Idea to Venture Opportunity, *Entrepreneurship Theory and Practice*, 41(6): 943-971.
- Volery, T., & Mazzarol, T. 2015. The evolution of the small business and entrepreneurship field: A bibliometric investigation of articles published in the International Small Business Journal. *International Small Business Journal*, 33(4): 374-396.
- Zhang, X., Huang, A., & Prybutok, V. R. 2006. An empirical study of factors affecting e-service satisfaction. *Human Systems Management*, 25(4): 279-291.
- Zhang, P., Wang, D. D., & Owen, C. L. 2015. A study of entrepreneurial intention of university students. *Entrepreneurship Research Journal*, 5(1): 61-82.

Zhao, F. 2005. Entrepreneurship and innovation in e-business: An integrative perspective. *International Journal of Entrepreneurship and Innovation*, 6(1): 53-60.

Zhou, R., Wang, X., Shi, Y., Zhang, R., Zhang, L., & Guo, H. 2018. Measuring e-service quality and its importance to customer satisfaction and loyalty: an empirical study in a telecom setting. *Electronic Commerce Research*.

1.5 Unpublished Works

White, A., & Weyl, E.G. 2016. Insulated platform competition. Working paper. Tsinghua University, Haidian, China.

Lu, Y., Tan, B. C. Y., & Wang, Y. 2013. Web aesthetics: How does it influence the sales performance in online marketplaces. Research in Progress. Thirty Fourth International Conference on Information Systems, Milan.

1.6 Electronic Documents

Neil Patel; 90% Of Startups Fail: Here's What You Need To Know About The 10%; Forbes; Available at: <https://www.forbes.com/sites/neilpatel/2015/01/16/90-of-startups-will-fail-heres-what-you-need-to-know-about-the-10/>; 2015.

Definition of *entrepreneur* in english; Oxford English Dictionary; Available at: <https://en.oxforddictionaries.com/definition/entrepreneur>; 09/07/18.