



CATÓLICA
LISBON
BUSINESS & ECONOMICS

Famel: A Case Study on Brand Revival Strategies

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FAMEL

Dissertation submitted in partial fulfillment of the requirements for the degree of MSc in Business Administration at
Católica-Lisbon School of Business & Economics

Major in Strategy & Entrepreneurship
Minor in Marketing

Thesis written under the supervision of Professor Pedro Celeste
June, 2016

Title: Famel: A Case Study on Brand Revival Strategies

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Abstract

Famel's motorcycles have been a part of Portuguese motorized history for over 50 years. Its models are iconic symbols of our culture and way of living. For motorcycle lovers, to hear its noise and see the smoke after it passes by, symbolizes well spent afternoons with friends in town's coffee shops, countryside strolls and visiting relatives, while growing up. After the announcements of its bankruptcy in 2002, for some, it was the end of an historic cycle, which made Portuguese proud of having a motorized brand they could call their own.

In 2014, Joel Sousa, an automotive engineer, saw the opportunity and value Famel brand had, and acquired the rights of the brand. The thought of having back again a motorized Portuguese brand, and one such as iconic as Famel, filled the imagination of motorized vehicles lovers with expectations and nostalgic feelings. The buzz generated was enormous, as well the positive feedback. Joel responsibilities and expectations were high but he knew what he had to do.

To support a successful brand revival, it was essential, at its early stages, to develop a strategy based on market characteristics and consumer exigencies. For this, the focus of this thesis was to develop the STP (Segmentation, Targeting and Positioning) that will be the foundation for all future strategic decisions.

Results showed that Famel's brand equity could be crucial for the success of this revitalization, as long it can be supported by a deep market analysis that will help sustain future strategic decisions.

Resumo

As motas Famel fazem parte da história motorizada portuguesa há mais de 50 anos. Os modelos tornaram-se símbolos icónicos da nossa cultura e forma de vida. Para alguns aficionados, ouvir o barulho ou ver o fumo característico que as Famel deixam ao passar, significa tardes bem passadas com amigos no café da aldeia, passeios pelo campo ou visitas a familiares enquanto cresciam. Quando foi anunciado o fim da empresa em 2002, para alguns foi o fim de um ciclo, que nos deixava orgulhosos por ter uma marca que pudéssemos considerar Nossa.

Em 2014, Joel Sousa, um engenheiro automóvel, reconheceu a oportunidade e o valor que a Famel tinha e adquiriu os direitos da marca. A expectativa de voltar a ter uma marca motorizada Portuguesa, ainda por cima, tão icónica com a Famel, encheu a imaginação dos aficionados com expectativas e sentimentos de nostalgia. O burburinho gerado e o feedback positivos foram enormes. As expectativas eram grandes, mas o Joel sabia o que tinha que fazer.

Para sustentar uma revitalização da Famel era essencial, numa fase inicial, elaborar uma estratégia que tivesse em conta as características do mercado e do consumidor. Por isso o foco desta dissertação foi desenvolver a segmentação, o consumidor alvo e o posicionamento que vão ser a base para futuras decisões estratégicas.

A pesquisa mostra que o valor da marca pode ser um fator determinante para o sucesso da revitalização e de futuras decisões estratégicas desde que suportados pelas informações adquiridas na análise do mercado.

Acknowledgments

I would like to start by thanking my father and sister for all the support and motivation they have shown me throughout my life and for the empowerment to reach higher both personally and professionally.

My special thanks to Joel Sousa, who always found the time and availability to contribute for this case study. Without his guidance, I would have never been able to get enough information for the development of this case study.

I would also like to show gratitude to family and friends for their valuable contribution.

A particular thanks to Diana Viegas for her tireless guidance, feedback and restless motivation and that helped me go through the advancements of this thesis.

I could not end without thanking to my supervisor Professor Pedro Celeste, whom from the beginning shared the exact same enthusiasm as me for the topic presented and who was essential for the development of this case.

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Introduction

The topic of this dissertation, on a broader approach, is to gather as much information possible to support the strategic decisions on the revitalization of Portuguese motorcycle brand - FAMEL.

The proposed analysis surged from the students' personal interest in a combination of several topics like the motorized vehicles market, the fact that FAMEL is a Portuguese brand, the startup characteristics of this case and the strategic marketing component of the study.

The fact that the FAMEL project is still in its yearly stages of execution is extremely interesting for me due to the entrepreneurship component of my master's degree and therefore it could be a good opportunity to apply what I've learned so far.

The analysis, on a first stage, will focus on the actual Portuguese and European motorcycle market and company's previous and actual capabilities information. The information will be structured using Porter's (1979) Five Forces analysis.

The second approach will be the description of the results given by the market research developed to get information about consumer insights using Keller's (2001) Consumer-Based Brand Equity (CBBE) Pyramid analysis. Using all the information collected during the study, the objective is to give recommendations that support strategic decisions already made and give insights for segmentation, targeting and positioning of the brand.

As the main objective of the study is to support Famel's already made and future strategic decisions, the aim also focus in giving and overall understanding of the Portuguese motorcycle industry to whoever might read the dissertation.

Research Problem

“The purpose of this thesis is to support already made choices by Famel and provide information to future strategical decisions on this brand relaunch.”

Key Research Questions

To answer to the research problem, it was necessary to validate the following research questions:

1. Are the European and Portuguese motorcycle market attractive for a new business?
2. What are the characteristics of the FAMEL company/brand?
3. What are competitor's product characteristics and brand knowledge?
4. What should be Famel's target and positioning?
5. What are the consumer insights about key brand equity elements?

Methodology

This is an exploratory study with two distinct approaches. The first one is merely observatory and uses primary data collection techniques to gather information about the motorcycle industry. Literature review, previous studies and available data about motorcycle markets will be used to elaborate on definitions, concepts and characteristics of this market. It will be use some marketing frameworks and analysis tools, like Porter's 5 forces analysis, STP analysis and Keller's CBBE dimensions, to structure the information.

The second approach can be divided in two types of market research: Qualitative and Quantitative. For the first marketing research technique, it will be done an interview to Joel Sousa, Famel project responsible, to help build the Case Study and gather information about the Portuguese motorcycle industry and Famel company.

To elaborate on the quantitative market research, it was made an online survey to customers. The objective was to gather consumer insight that could help support strategical decisions and understand brand equity. The focus was on understanding how motorcycle are used, by who, in which circumstances, how they are used, what characteristics consumers valued more, their perceptions about available brands and new model traction. The questions had into account Famel's requisite information.

The online survey had 1200 respondents.

Literature Review

Famel's decline in the 90's, due to lack of competitive strength and vision when facing foreigner motorcycles brands, it's a situation that happens frequently on different markets around the world. Changes in consumer tastes and preferences, the emergence of new competitors or new technology, or any new development in the marketing environment could potentially have a profound effect on the fortunes of a brand. Nevertheless, a number of these brands - such as Harley-Davidson or Indian motorcycles - have managed to make impressive comebacks in recent years as marketers have breathed new life into their customer franchises. To revive their fortunes, brands sometimes have had to "return to their roots" to recapture lost sources of equity (Keller, 1999).

To do so, it is crucial to have knowledge of the company's capabilities and of the causes of competitive forces. This will highlight the areas where the company should confront competition and where to avoid it. (Porter, 1979) The selection of a positioning strategy involves identifying competitors, relevant attributes, competitor's positions and market segments (Aaker & Shansby, 1982). To support strategic decisions it is crucial to use all the leverage on all Famel brand equity. As Farquhar (1989) said, brand equity is the "added value" with which a brand endows a product; this added value can be viewed from the perspective of the firm, the trade, or the consumer. Later, Keller (1993) also supported this thinking, adding a conceptual framework that defined Customer-based brand equity (CBBE) as the differential effect of brand knowledge on consumer response to the marketing of the brand.

Finally, and regarding the expected electric motorcycle Famel is developing, sometimes a sleepy industry can be revitalized by a product witch obsoletes the existing installed base and accelerates the replacement cycle (Aaker, 1991).

This chapter contains a brief literature review discussing brand revivals, brand strategic planning decisions, brand equity related topics and views on Product innovation.

Brand revitalizations

For brands to be revived, first, there was something that went wrong. Thomas & Kohli (2009) predicted that managerial actions are probably the most common cause of brand decline. Light (2016) furthered this thinking by establishing twelve troubling behaviors or sources for brands getting off track: (1) the arrogance of great success; (2) The comfort of complacency; (3) Building organizational barriers and bureaucratic processes; (4) The focus on analyst satisfaction rather than customer satisfaction; (5) The belief that what worked yesterday will work today; (6) The failure to innovate; (7) The lack of focus on the core customer; (8) the backtracking to basics; (9) the loss of relevance; (10) the loss of coherent plan to win; (11) The lack of a balanced brand business scorecard and (12) disregard for the changing world.

As said before, there were successful cases of brand revivals in the pass (e.g. Harley-Davidson, Indian Motorcycles) and the premise here is that a brand to be worth reviving there must be significant residual value in one or more of the components of brand equity. (Thomas & Kohli, 2009). Thomas & Kohli (2009) added that reviving a brand is not just feasible; it may very well be a more attractive strategy than launching a new brand. This is further supported by their suggestions that in most cases there is a significant amount of equity in declining brands, and with proper diagnosis, strategy, and execution, a brand can be revived. In today's marketplace, where introducing a new brand costs tens of millions, revitalizing existing brands is a worthwhile exercise. Aaker (1991) reinforces even further saying that to challenge in a mature product class, such as the motorcycle market, it is usually best to revitalize an existing established brand in a defined product class than to attempt a new entry. Given a strong brand heritage and relevance to today's market, brand revival may provide a very cost-effective means of succeeding in a business venture (Bellman 2005).

Revitalizing a brand requires either that lost sources of brand equity be recaptured or that new sources of brand equity be identified and established (Keller, 1999). Therefore, the first step in assessing whether the brand is worth reviving, entails examining all three elements of brand equity: knowledge, the differential effect of this knowledge, and customer response. (Thomas & Kohli, 2009)

After this step Bellman, (2005) felt that for considering starting a business with a brand revival, it is required three things: acquiring a brand with the right characteristics, at the right price, and having the know how to successfully relaunch the brand. Thomas & Kohli (2009) deepened this revival stages explaining that it is needed: (1) to take a long-term perspective, (2) to carefully reposition the brand, invest in it, and educate the market; (3) and to correct mismanagement of the brand: Rebuild quality; Resist temptation to “milk” the brand; and Pursue a carefully defined target market. For Light (2016) there were needed six rules for the revitalization of brands: (1) Refocus the organization; (2) Restore brand relevance; (3) Reinvent the brand experience; (4) Reinforce a results culture; (5) rebuild brand trust and (6) realize global alignment.

There are different views on how to revitalize a brand but for Famel, after taking into consideration this steps for revitalization, is important to know that with proper planning and brand equity usage, an entrepreneur may be able to substantially increase his or her chances of success, rather than spending the enormous amount of capital required to build new brand image. (Bellman, 2005)

To leverage on consumers nostalgia about the brand could be a good strategy, but conclusions suggest that nostalgia targeting is not enough; the revived brand must be repositioned to satisfy today’s customer values (Bellman, 2005). Nostalgic remembrance means strong recognition, which greatly contributes to brand revival but may work only if people do not associate the product as an old brand (Bellman 2005).

In 2000 the old Mini was completely withdrawn from production and the new Mini Cooper, designed and manufactured by new brand owner BMW, was launched in 2001. Consumer’s perceptions of a brand are represented by brand awareness and brand image. A study revealed that the brand's appeal is largely at an emotional level based on the brand's symbolic image and key associations. The study concludes that associations are key to stakeholders' perceptions of the brand. In particular associations related to the brand's heritage and product-related associations such as the car's aesthetics and handling. (Simms, 2006)

A good approach to starting a firm with a revived brand is to have hands-on knowledge of the industry, its consumers, the positioning of the brand, and even experience with the brand itself

(Bellman 2005), so to achieve this knowledge, the use of key market analysis tools, is crucial for brand revival success.

Brand strategic planning

Following the previous insights about brand revival, the gathering of information on the motorcycle market is essential for Famel to understand the industry and project the best action plan. Keller (1999) explains that in mature markets, building loyalty and retaining existing customers is generally more important.

Porter (2008) supports this idea and adds that to understand industry competition and profitability one must analyze the industry's underlying strengths in terms of the five forces. This analysis gives an overall idea of the competing characteristics of the business. The five forces include competition, supplier strength, customer power, the potential for new companies joining the industry, and the threat of substitute products. They highlight the critical strengths and weaknesses of the company, animate de positioning of the company in its industry, clarify the areas where strategic changes may yield the greatest payoff, and highlight the places where industry trends promise to hold the greatest significance as either opportunities or threats (Porter, 1979).

The study results have to be structured for better comprehension of their implications in Famel strategy. Proctor (2000) analysis showed that most executives employ the following steps: segment the market, target the users, and position the products.

It is sometimes referred to as STP process, and the goal is to guide the organization to the development and implementation of an appropriate marketing mix.

Segmentation

Following the previous insights about brand revivals, Keller (1999) said that segmenting on the basis of demographic variables and identifying neglected segments is thus one viable brand revitalization option.

Proctor (2000) reinforces this by defining segmentation as a marketing management technique which can help firms find ways of establishing a competitive advantage. A market segment is a

section of a market which possesses one or more unique features that both give it an identity and set it apart from other segments. Market segmentation amounts to partitioning a market into a number of distinct sections, using criteria which reflect different and distinctive purchasing motives and behavior of customers. Dibb & Blois (2000) further attributes importance to segmentation saying that the underlying principle of market segmentation is that individual customers have different product and service needs and that similar customers can be group together.

Targeting

Keller (1999) supported that the marketing challenge in acquiring new customers, lies in making a brand seem relevant to customers from sometimes vastly different generations, cohort groups, and lifestyles. This challenge is exacerbated when the brand has strong personality or user image associations that tie the brand to one particular consumer group. This seems to be Famel's case. He deepens this statement in revitalizing brands by saying that a strategic option could involve, simply, more or less, abandoning the consumer group that supported the brand in the past and targeting a completely new market segment (Keller, 1999). Even if targeted customer changes, if a brand has a good name with a heritage, the name will help products to succeed in their new targeted markets. (Bellman, 2005)

To segment consumer markets, one can use different variables like geographic, demographic, psychographic and behavior patterns. (Proctor, 2000)

A target market is the market or market segments which form the focus of the firm's marketing efforts. There are three targeting strategies: mass marketing, single segment and multi segment. In Famel's specific case, the strategy that most applies is the single segment strategy: concentration on a single segment with a product/service concept (Proctor, 2000). The business is able to specialize, to design its product and marketing effort specifically for customers within this chosen segment. The emphasis on a single group of customers allows the business to invest its entire resources in building an excellent understanding of the segment. This concentration of marketing effort may allow a company to avoid the attention of larger competitors operating in other segments. This also explains why a concentration strategy is sometimes used to gain access to new markets. Blois & Dibb, (2000) found that new businesses without the resources to take on larger competitors often find this as a particularly effective route.

Positioning

Finally, and probably the most important step of the STP process is positioning. Aaker & Shansby, (1982) affirm that the selection of a positioning strategy involves identifying competitors, relevant attributes, competitor positions, and market segments. Research based approaches can help in each of this steps. For Keller et al (2002) to positioning a Brand, first, one needs establishing a frame of reference, which signals to consumers the goal they can expect to achieve by using a brand. There are minimal product requisites that must be met if consumers are to perceive your product as a legitimate and credible player within the desirable frame. At the same time it is needed to have unique product characteristics so the brand can have strong, favorable, unique associations that distinguish it from others in the same frame of reference. For Keller et al (2002) this are fundamental requisites to have successful brand positioning. Aaker & Shansby (1982) considered that making a positioning decision requires a segmentation commitment and an economic analysis and propose the following positioning strategies (1) by attribute, (2) by price/quality, (3) with respect to use or application, (4) by product user, (5) with respect to product class, (6) with respect to competitor.

Brand equity

According to the American Marketing Association, a brand is a name, term, symbol, sign, design, or some combination thereof that identifies the products of one firm while differentiating them from competitors' offerings. For many businesses the brand name and what it represents, are its most important asset – the basis for competitive advantage and of future earning streams (Aaker, 1991). Following the definition of brand, Thomas & Kohli (2009) suggest that most brands with high levels of awareness or positive brand image are candidates for revival. There were several definitions for brand equity, as the ones from Farquhar (1989) that defines Brand equity as the "added value" with which a brand endows a product; this added value can be viewed from the perspective of the firm, the trade, or the consumer; Aaker (1991) considers brand equity as a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product to a firm's customers; Keller (1993) furthers the definition using Customer-based brand equity as the differential effect of brand knowledge on consumer response to the marketing of the brand; and Ambler (1996) that considers Brand equity as the aggregation

of all accumulated attitudes and behavior patterns in the extended minds of consumers, distribution channels and influence agents, which will enhance future profits and long term. We can deduce that A brand's equity is often considered the single most valuable asset for a company (Thomas & Kohli, 2009).

The first step in identifying the value of brand equity is to understand what it is – what really contributes to the value of the brand (Aaker, 1991). Customer-based brand equity occurs when the consumer is familiar with the brand and holds some favorable, strong, and unique brand associations in memory (Keller, 1993).

Farquhar (1989) suggested three elements to build a strong brand: (1) positive brand evaluations: affective responses, cognitive evaluations and behavioral intentions; (2) Accessible brand attitudes: Automatic activation or controlled activation; (3) consistent brand image, and three ways to get brand equity (1) creating positive brand evaluations with a quality product, (2) fostering accessible brand attitudes to have the most impact on consumer purchase behavior, and (3) developing a consistent brand image to form a relationship with the consumer. The goal should be creating strong, favorable, and unique brand associations in the minds of consumers. The most important consideration in reinforcing brands is the consistency (Keller, 1999).

Keller (2001) developed the *Consumer-based Brand Equity Pyramid*, a tool that enables managers a view on brand's equity. To build it, brands need to take four steps: (1) establishing the proper brand identity, that is, depth of brand awareness, (2) creating the appropriate brand meaning through strong, favorable and unique brand associations, (3) eliciting positive, accessible brand responses, and (4) forging brand relationships with customers. This involves establishing six brand building blocks: brand salience, brand performance, brand imagery, brand judgments, brand feeling, brand resonance. (Figure 7)

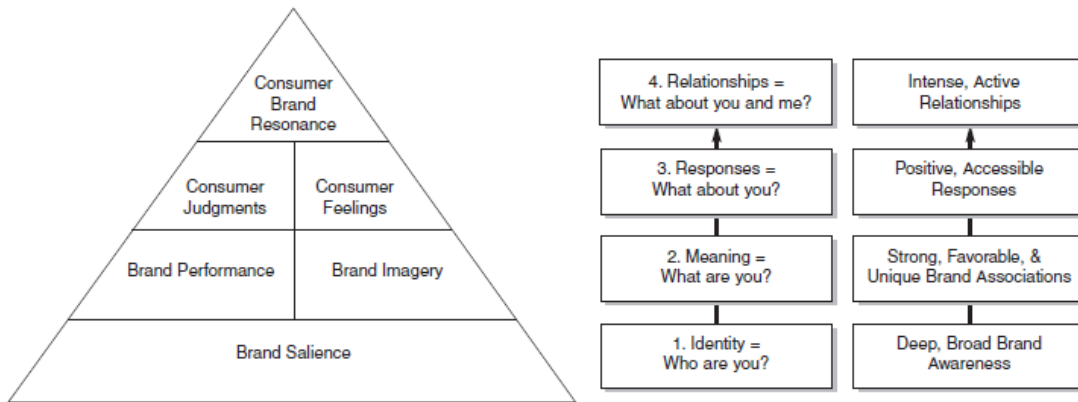


Figure 1 - Customer-Based Brand Equity. Source: Keller, KL 2001, 'Building Customer-Based Brand Equity: A Blueprint for Creating Strong Brands', Marketing Science Institute, Report no.01-107, p. 7

Brand identity or brand salience relates to aspect of customers awareness of the brand in terms of two dimensions – depth and breadth. Depth of brand awareness refers to how easily customers recall or recognize the brand. Breadth refers to the range of purchase and consumption situations in which the brand comes to mind.

Brand meaning can broadly be distinguished in terms of functional, performance related considerations versus abstract, imagery-related considerations. They can be formed by customers own experiences and contact with the brand or indirectly through other source of information.

Brand responses relates on how customers respond to brand through several sources of information, what think or feel about brand. Can be distinguished according brand judgments and brands feeling. Brand judgments involve how customers put together all different performance and imagery associations to form their opinion. Brand feelings are emotional responses and reactions with respect to the brand.

Brand relationships or brand resonance refers to the nature of the relationship that customer has with the brand. Is characterized in terms of intensity or depth of psychological bond as well the level of activity engendered by this loyalty. Repeat purchases, the extent that customers search for brand information or active engagement are examples of this. (Keller, 2001)

Brand equity can be a source of value to the firm: (1) it can enhance new customers attraction and recapture old ones; (2) can provide reasons to buy and affect use satisfaction at the same time it reduces intentions to try others; (3) permits premium pricing; (4) provide platform for brand

extensions; (5) leverage in distribution channel and (6) provide a competitive advantage that presents a real barrier to competitors (Aaker 1991).

Product innovation

The motorcycle industry can be considered a mature market with several entry barriers, mainly established by big players. Experience curve can be entry barrier because a combination of elements like economies of scale, learning curve for labor and capital-labor substitution, can cause the decline of unit costs. But the barrier can be nullified by product or process innovation leading to a substantially new technology and thereby creating a new experience curve (Porter, 79). Aaker, (1991) reinforces this idea by saying that sometimes a sleepy industry can be revitalized by a product which obsoletes the existing installed base and accelerates the replacement cycle. For brands like Harley whose core associations are primarily product-related attributes and/or functional benefits, innovation in product design, manufacturing, and merchandising is critical to maintaining or enhancing brand equity (Keller, 1999). Several key factors influence the success or failure of entrepreneurial ventures. These include possessing innovative products or services backed by experienced management teams, strong consumer need, and the availability of necessary resources such as skilled labor, excellent facilities, adequate capital, appropriate technology, and profitable revenue models. (Bellman, 2005)

The high costs of entry in the auto market have led many to speculate that even if a better product existed, incumbents could successfully keep it off the market. A prime example is the electric car, which has long been a dream of those seeking to reduce auto emissions but a product that many considered as too difficult to introduce. (Stringham et al, 2015)

In the electric motorcycle industry, findings suggest that motorcycle firms should invest in promoting image, value, and usefulness for green product consumers. Improving the overall image of an electric motorcycle leads to positive consumer assessment when purchasing. Therefore, as image, usefulness and value levels increase, purchase intention also increases. (Jih-Hwa Wu, et al, 2015)

1. Famel Case

“The best case scenario would be a lot of pre-orders after unveiling the prototype or an international investor who would take interest in the project and take it to the next level, improving it and making it bigger. The worst it could happen is the project to have a big buzz, but the product doesn't match that interest in sales. You can have the best product in the world but if you can't sell it, it's worth nothing.”

This is what was in the mind of the visionary, Joel Sousa (JS), behind the re-launch of the Portuguese motorbike legend brand – Famel, after the tremendous buzz, generated in 2014, prior to the announcement of the revitalization.

Joel Sousa, an 29 years-old automotive engineer, is the responsible for the revitalization of the brand that expects to bring to public, in late 2017, a prototype that could end all his doubts about the future success or failure of this entrepreneur challenge.

To comprehend this market and environment, the analysis of what's at stake is fundamental for the decisions to be made now forth.

2. Company overview and history

The FAMEL (Fábrica de Produtos Metálicos Ltda.) company was one of the major players in the Portuguese motorcycle industry between the 60's and late 80's, producing some of the best-selling motorbikes models for almost three decades. Its headquarters and factory where located in Águeda, north of Coimbra, and its models used Zundapp (German motorcycle producer brand) motors.

The last model designed was projected in 1997, and it was an electric powered motorbike called Famel Electron. For lack of state support, it didn't went through.

When Portugal entered the CEE, the company wasn't able to compete with foreign players, and declared bankruptcy in 2002, after some court rulings regarding debts. Also the bankruptcy of the

German motor supplier (Zundapp) in 1984, whose parts FAMEL was dependent on, didn't help for the stability of the company and started its downwards path. The lack of vision and innovation could also be a reason for the ending of the brand.

As Joel said, Famel was considered as the brand for the people with “*low resources*” and a “*cheap vehicle*”, accessible for the low income population. It was used for small trips like going to work, for a coffee with friends or countryside small runs. More recently it was used as a recreation motorcycle, the one families have in the storage house for youngsters to use when visiting older relatives in their origin cities. “*Almost everyone has a father, a grandparent, an uncle or a neighbor that has an old FAMEL*”

FAMEL motorbikes have been seen more and more frequently as icons and acquired as vintage pieces for restoration. “*As time goes by, the FAMEL motorbikes acquired a value, a certain mysticism, which made motorbikes fans buy and restored old bikes. They do it because they remind them of their childhood and youth.*”

In 2014, Joel identified the opportunity of acquiring the rights of the brand when the previous owner tried to sell them. The thought of having, at the time, the right vision and the right technical skills allied with the brand value, made him advance with a proposal, which, after negotiations, was accepted. Joel's proactive personality and open minded view of this project could be crucial for the success of this endeavor, traits that make him the right person to pursue the revitalization. The company is not yet legally establish but JS is hopping to register it sometime near the launch of the prototype.

The objective is “*to return to the origins*” and relocate the company back to Águeda, its original production site. “*In terms of History and marketing it could be beneficial for the brand*”.

Until August 2015 the project was being developed by JS and two more collaborators. A designer, specialized in product design, who made the first sketches for the new XF-17 model prototype and a website designer company called Primariu which develop the project website.

“The idea is to develop a kind of revival of the most iconic FAMEL model, the XF-17, like Mini did with Mini, Fiat did with the Fiat 500 or VW did with the Beatle”

The most difficult part for Joel is to get suppliers that accept collaborating with FAMEL without knowing the future production. From the moment they are all selected and chosen and the final draft of the prototype is completed, Joel expects to employ between 5 and 6 workers to start assembling a first wave of vehicles that will serve as tests for the mass production product. In the future the objective is to prepare other models.

Since the disclosure of the new project the feedback couldn't be better: thousands of messages and emails giving support and advice, over 11000 followers on the new Famel Facebook page, several articles and interviews for major Portuguese media such as Marketeer and ACP magazines, TSF radio channel and SIC TV channel, 400 website newsletter subscribers and over 3400 views on their YouTube page.

3. The XF-17 Model



Figure 2 - Old XF-17 model vs New XF-17 Prototype. Sources: soxf.blogspot.com & Famel

The most iconic and successful FAMEL model was the XF-17. Inspired on the design and characteristics of the Suzuki Stinger T125 (Figure 17, Appendix 5), it had its golden age from late 70's until the beginning of the 90's. It was lean, low and light, it could be used for several purposes and was considered as the *“Sports bike of the poor”*. Its motor could be easily and illegally changed for it to get better performances. *“It was a motorbike ahead of its time”*.

For this reasons, this model was the chosen one to be the first for the new FAMEL brand and hopefully not the only one in the future. The designs were made from scratch but they were not

entirely new. JS wanted to be faithful to some of the old characteristics like the two shock absorbers, the deposit and seat shape, the lettering and the logo. “*Bring it all back*” JS said. Not all, apparently, since the characteristic noise and smoke are not legally allowed anymore. To construct a prototype ready for production, Joel estimates costs between 50.000€ to 75.000€.

Right now, the project is at its procurement stage, where it is essential to find the right suppliers for the parts, specifically European, with special focus on the quality. “*Chinese components give negative insights about the product*”. To have an entirely “made in Portugal” motorbike is almost impossible due to the lack of components availability.

Joel’s expectation is that this new XF-17 would be a good 125cc motorcycle equivalent, fully electric, with battery nominal power around 11kW, approximately 100km range and a standard roadster type of chassis.

A1 licensing requirements for petrol motorcycles are based on max power and displacement, and according to EU Directive 2012/36/EU, the corresponding requirements for electric motorcycles are based on continuous power of no more than 11kW. Hence, holders of valid driving license for category B (passenger cars) are qualified for driving displacement motorcycles not exceeding 125cc or a maximum power up to 11 kW (A1), provided they are 25 or more years old or are valid legal authorization holders for driving motorcycles (Law No. 78/2009 of 13 August).

4. European¹ motorcycle Industry²

After massive decline in value terms recorded over 2012 and 2013 and parts of Europe performing particularly poorly, the regional motorcycle market is expected to stabilize and post a growth going forward. Even though the market is predicted to grow marginally in volume, by 2019, approximately 1.5 million two-wheelers are predicted to be sold and the slight growth of manufacturer’s income should defuse strong competition among market players. Most of the demand comes from France and Germany, as these two countries account for almost a third of the

¹ **Europe** comprises Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.

² Source: Motorcycles in Europe July 2015 - Marketline

total European motorcycle market value. Although the luxury motorcycles are the main driver in this market, there is a noticeable trend towards purchase of scooters, especially among citizens of bigger cities.

4.1 Motorcycle Segments

The **motorcycles market** consists of all classes of on- and off-road motorcycles including scooters and mopeds.

- (1) **'Mopeds'** are powered two-wheeler vehicles with engine capacity of less than 50 c.c., generally also equipped with non-motorized propulsion and with restricted maximum speed.
- (2) All powered two-wheelers other than mopeds are classed as **'motor-cycles'**.

4.1.1 Types of motorcycles

For the extent of this analysis, only street motorcycle definitions will be made, due to the fact that off-road motorcycles are specially designed for off-road events and sports.

- (1) **Standard**: also called naked bikes or roadsters, are versatile, general purpose street motorcycles. Because they are flexible, have lower costs and engines with moderate output, they are particularly suited to motorcycle beginners. This type of motorcycle is the one Famel will use for the XF-17.
- (2) Cruiser
- (3) Sport bike
- (4) Touring
- (5) Sport touring
- (6) Dual Sport
- (7) Scooters

4.2 Consumer characteristics³ (Figure 18, appendix 5)

Regarding consumer's psychographics preferences they can be group in six types of consumers:

³ Giovanni Gavetti: Ducati case study, March 2002

- I. **“Knee down riders”** – Racing aficionados that search extreme performance, functionality reliability and technical excellence.
- II. **“Easy-riders”** – the opposite of “knee down” and associate motorcycles to a particular lifestyle and value comfort
- III. **“Weekend riders”** – they prefer a more balanced motorcycle, that has good functionality and comfort
- IV. **“Highway lovers”** – they value the most - comfort and functionality
- V. **“Fast Riders”** – similar to knee down riders but value a more balanced motorcycle
- VI. **“Hot rodders/urban riders”** – Performance and motorcycle lifestyle are the characteristics this riders search.

4.3 Market values

The European motorcycle market suffered a declined in value through the years 2010-2014 of -5.8% (compound annual rate of change - CAGR) (Table 1). After this period the trend was expected to change, being 2014 a year that already had positive growths of 6.2% in terms of value.

Year	\$ billion	€ billion	% Growth
2010	13.2	10.0	
2011	12.4	9.4	(5.9%)
2012	10.7	8.0	(14.3%)
2013	9.8	7.4	(7.9%)
2014	10.4	7.9	6.2%
CAGR: 2010-14			(5.8%)

Table 1 - Europe motorcycles market value: \$ billion, 2010-14. Source: Marketline

In terms of volume, the year of 2014 registered an increase of 2.8%, reaching 1.4 million units sold (Table 2), even though the CAGR for 2010-14 period was negative: -6.1%.

Year	million units	% Growth
2010	1.8	
2011	1.8	(2.8%)
2012	1.6	(11.3%)
2013	1.4	(12.4%)
2014	1.4	2.8%
CAGR: 2010-14		(6.1%)

Table 2 - Europe motorcycles market volume: million units, 2010-14. Source: Marketline

In terms of market segmentation, by 2014, motor-cycles was the largest segment in the European market accounting 73.1% of the total sales. Mopeds had 26.9%. (Table 14, Appendix 5)

The geographic segmentation accounted, by 2014, a 19.9% market value in Germany followed by France with 17.1% (Table 15, Appendix 5). Germany and UK, oppositely to the other European countries, had positive CAGRs for the 2010-14 period, of 2% and 0.9% respectively.

The European market leader in 2014, was Piaggio with 14.2%, followed by Yamaha – 13.6% and Honda – 11.9% (Table 16, Appendix 5).

The forecast in terms of value for the European market in 2019 will be \$12.2 billion (Table 3) an increase of 17.1% compared to the 2014 value. In terms of volume, it is expected the units sold number will be of 1.5 million units, a 1.4% increase since 2014. The CAGRs, for both value and volume, would be 3.2% and 1.4% respectively, in the 2014-19 period.

Year	\$ billion	€ billion	% Growth
2014	10.4	7.9	6. %
2015	10.8	8.1	3.6%
2016	11.1	8.3	2.3%
2017	11.4	8.6	2.9%
2018	11.8	8.9	3.6%
2019	12.2	9.2	3.5%
CAGR: 2014-19			3.2%

Table 3 - Europe motorcycles market value forecast: \$ billion, 2014–19. Source: Marketline

4.3.1 Electric motorcycle market

As it is a small market, there is not much information about electric motorcycles sales in Europe, so the example here will be the French market, the largest in Europe. There was an increase of sales between 2014 and 2015, due mostly to the increase in sales of Electric Motion, a French electric trial bikes manufacturer. Generally, there were sales decreases for several models being Zero ZF and Brammo Empulse the exceptions. (Table 4)

MOTORCYCLES	2015	2014	Variation
Electric Motion EM5.7	39	5	680%
Zero	38	45	-16%
DS	11	12	-8%
FX	2	2	0%
MXD	0	1	-100%
S	2	19	-89%
ZF	23	11	109%
KTM E XC	16	21	-24%
Brammo	9	10	-10%
Empulse	8	6	33%
Enertia	1	4	-75%
Total	103	81	27%

Table 4 - French electric motorcycles above 50cc-equivalent sales: volume, 2014-15. Source: CSIAM

For the 125cc-equivalent scooter category, the French market registered a 52% increases during the 2014-15 period. There were a total of 449 125cc-equivalent electric scooters sold in 2014 which showed an increase of demand in petrol alternatives (Table 17, Appendix 5). The 50cc-

equivalent electric scooters market also showed to have an increased in demand, as demonstrated by the increased sales of Govecs brand.

4.4 European Industry Attractiveness⁴ (Figure 3)

The motorcycles market will be analyzed from the manufacturer's (brands) perspective. The key buyers will be taken as motorcycle dealers and key suppliers are manufacturers of raw materials and components.



SOURCE: MARKETLINE

MARKETLINE

Figure 3 - Forces driving competition in the motorcycles market in Europe, 2014. Source: Marketline

4.4.1 Suppliers: Raw materials, components manufacturers (Figure 20, Appendix 5)

Key inputs for a motorcycle manufacturer include aluminum and steel sheet, bar, castings, and forgings, as well as finished components such as fuel injection systems, seats, batteries, and tires. It is more cost-effective to source these items from specialist manufacturers than to produce them in-house. Amongst providers, there are large, multi-nationals with a strong presence within the global markets which boosts their power. Market players often sign contracts with their providers, strengthening their power. The high importance of the raw materials to the manufacturers of motorcycles can enhance supplier power furthermore.

⁴ Source: Motorcycles in Europe July 2015 - Marketline

Typical suppliers are also likely to sell to a wide variety of manufacturing components, with the motorcycles market only constituting a minor part of their revenues, which strengthens the suppliers' position. However, with minimal differentiation of raw materials there is little to distinguish between suppliers. Manufacturers also have low switching costs thus lowering supplier power further. Overall, supplier power within this market is moderate.

4.4.2 Buyers: Motorcycle dealers (Figure 21, Appendix 5)

Buyer power in this market is weakened by a high level of product differentiation and customer loyalty with respect to dominating brands. There are several buyers with substantial size so the loss of one could be potentially damaging for manufacturers. The leading brands sell a big portion of their vehicles through franchised dealerships and being customers loyal to this brands, dealers lose power because they need to have big brands products. There is a large number of buyers within motorcycle market and the number is expected to increase following the predicted market growth rate, coupled with high level product differentiation, weakening buyer power. As it is unusual to integrate business backwards into manufactures area, dealers tend to decrease even more their power. Even though, the overall factor is assessed as moderate.

4.4.3 Competitive Landscape (Figure 19, Appendix 5)

The rivalry is boosted by the presence of large, international incumbents: together the top four companies account for 45% of the market's share by volume, meaning the market is fragmented. There are several options regarding brand availability, but the presence of such large multi-national companies, with exceptionally high assets, boosts the degree of rivalry. Fixed cost and exit barriers are of significant meaning within this market and leaving it requires substantial divestment of highly specific assets. These factors enhance the rivalry.

4.4.4 Entry barriers (Figure 22, Appendix 5)

As the market is expected to grow in terms of value and volume, global top brands competition is not based primarily on the price of the product and this factor usually has a low priority. However, setting up production facilities involves large capital outlay thus constituting a significant entry barrier and high fixed costs. Additionally, leading motorcycle brands such as Honda, Yamaha or Piaggio enjoy an exceptionally high level of brand recognition, which is reflected in their high

sales volumes and market dominance. Due to the existing strength of premium motorcycle brands, it is difficult for new entrants to introduce their products into the market. However, sales are sensitive to price and it is possible for manufacturers to enter markets through the sale of budget vehicles, as we could see from the Keeway example.

The global tightening of emission standards is ramping up costs further as motorcycle re-designs are required. Such a trend can trigger the demand for newer, more economical engines, involving higher costs of R&D spending. The EU has one of the strongest emissions guidelines; currently, emissions of NOX, HC, carbon monoxide (CO), regulating particulate matters and vehicles that do not meet the standards are not permitted. Overall, the threat of new entrants with respect to the European motorcycles market is weak.

4.4.5 Threat of substitutes (Figure 23, Appendix 5)

Substitutes to the motorcycles market consist of other types of vehicles or means of transport. The threat of substitution with respect to the motorcycles market is dependent upon the necessity of motorcycle use to the end-user. In the majority of European countries, motorcycles are seen as a luxury, rather than a car substitute. They are more often used for leisure purposes than for commuting and in times of economic uncertainty demand will fall. In this case, the threat from substitutes is higher, as consumers are more likely to continue using other vehicles or public transport, than purchase a motorcycle which may be viewed as a luxury rather than a necessity. Another alternative threatening motorcycle manufacturers is used motorcycles. These may be sold privately, or by dealers that also offer new motorcycles, and will almost always be cheaper than a new vehicle of similar specification. The threat of substitutions is considered moderate.

5. Portuguese motorcycle industry⁵

The Portuguese motorcycle industry is highly concentrated with four brands totaling over 64% of the market share, existing 86 different brands competing through the available motorcycles classes.

It's a market that followed the European trends, and since 2014 has been growing, mostly on the above 125cc class. The Portuguese motorcycle market is getting an "invasion" of offers by the

⁵ Source: ACAP

Chinese and Korean brands but is still controlled by the Japanese manufacturers Honda and Yamaha.

The industry will be analyzed through three classes, the ones ACAP established, between the years of 2012 and 2015: between 50cc and 125cc class, above 125cc class and an overall market view of all the motorcycles over 50cc.

5.1 Portuguese motorcycle product category analysis: 50cc-125cc

The new Famel model will be inserted in this category, even though it doesn't comply electric motorcycle brands.

As depicted in Table 5, the market had a negative CAGR growth of -4.2% between the years of 2012 and 2015.

Brand	Units		%	% Total	
	2015	2012	Var	2015	2012
HONDA	3594	4062	-11,5	31,6	30,6
YAMAHA	1390	910	52,7	12,2	14,2
KEEWAY	1921	1696	13,3	16,9	12,8
SYM	1356	1882	-27,9	11,9	6,9
Others	3116,0	4726	-34,1	27,4	35,6
Total	11377	13276	-14,3	100,0	100,0

Source: ACAP CAGR 2012-15 (4.2%)

Table 5 - Portuguese motorcycles market sales: Units and % market share, 50cc-125cc, 2012–15. Source: ACAP

5.1.1 Competitive analysis: 50cc – 125cc

The market leaders in 2015 were Honda with 31.6% of market share, followed by Keeway – 16.9%; Yamaha – 12.2%; and Sym – 11.9%.

In 2015, Honda register a 15.1% increase in sales, Keeway 3.1% increase, Yamaha 37.6% increase and Sym -12.2% decrease.

5.2 Portuguese motorcycle product category analysis: over 125cc

Famel hopes to be present in this class of motorcycles in the future, with new models.

As we can see from Table 6, the market had a positive CAGR of 25.3% between the years of 2012 and 2015.

Brand	Units		%	% Total	
	2015	2012	Var	2015	2012
HONDA	1653	1351	22,4	26,5	28,4
YAMAHA	1232	584	111,0	19,8	15,9
BMW	970	584	66,1	15,6	18,1
KAWASAKI	415	77	439,0	6,7	4,4
Others	1957	1328	47,4	31,4	33,1
Total	6227	3924	58,7	100,0	100,0

Source: ACAP CAGR 2012-15 25,3%

Table 6 - Portuguese motorcycles market sales: Units and % market share, over 125cc, 2012–15. Source: ACAP

5.2.1 Competitive analysis: over 125cc

The market leaders in 2015 were Honda with 26.5% of market share, followed by Yamaha – 19.8%; BMW – 15.6%; and Kawasaki – 6.7%.

In 2015, Honda registered increases in sales of 19.4%, Yamaha of 40%, BMW of 24.8% and Kawasaki 56.6%.

5.3 Portuguese motorcycle product category analysis: over 50cc (overall market)

As we can see from Table 7, the market had a positive CAGR of 1.6% between the years of 2012 and 2015.

Brand	Units		%	% Total	
	2015	2012	Var	2015	2012
HONDA	5247	5413	-3,1	29,8	31,5
YAMAHA	2622	1494	75,5	14,9	8,7
KEEWAY	1936	1712	13,1	11,0	10,0
SYM	1488	2015	-26,2	8,5	11,7
Others	6311	6566	-3,9	35,8	38,2
Total	17604	17200	2,3	100,0	100,0

Source: ACAP CAGR 2012-15 1.6%

Table 7 - Portuguese overall motorcycles market sales: Units and % market share, 2012–15. Source: ACAP

5.3.1 Competitive analysis: over 50cc (overall market)

The market leaders in 2015 were Honda with 29.8% of total market share, followed by Yamaha – 14.9%; Keeway – 11%; and Sym – 8.5%.

In 2015, Honda registered increases in the overall sales of 16.4%, Yamaha of 38.7%, Keeway of 3.3% and Sym was the only one to decrease its sales -12%.

6. Portuguese market: electric characteristics and players

The focus of the Portuguese electric motorcycle market analysis is important due to Famel's expected product characteristics.

6.1 Electric motorcycles: products available

From the previously identified electric competitors by Joel, plus a more recent research of the available electric options in the Portuguese market, the Table 18, Appendix 5, describes the specificities of the models. There are several other characteristics that could be analyzed but to

facilitate the comparison between available options, only nominal power, price and range were selected.

As described in the table, there are not a lot of options regarding electric motorcycles in Portugal, more specifically in the range of 125cc-equivalent (around 11kW power batteries) electric models with standard roadster type chassis, the one the XF-17 will adopt. At a first glimpse there are four categories of electric motorcycles available in the market that resemble in terms of characteristics, aspect and target inside their type of motorcycle described below.

The first, here represented by Butalco, resembles a bicycle with electric motor. They have pedals, light weights and lower battery powers. This type of mopeds target people with more active life, and are used for recreational and sports purposes (trial motorbikes) or as bicycles substitutes to dislocate in the city.

The second, the scooter like category, has a lot of options available, like the ones from Peugeot, BMW and other less known brands. Most of this electric scooter models are 50cc electric equivalents, so in this study, the focus on the 125cc-equivalent scooter class will be represented by the Govecs and Ventrrix. Cheaper options than the more powered motor-cycles, without the effort of pedaling, they target people that want to dislocate in city, avoid traffic, but don't really care about power.

The most similar models to the expected XF-17 available are the ones from Zero, Volta and Brammo. The similarities in terms of aspect, size, weight, power and range, contribute for the insertion of the new Famel model in this third category – standard roadster type chassis. This motor-cycles target people that value power, adaptability to several terrains, robustness of the build and are able to afford expensier models.

Finally, in a category of its own, the more powerful and robust models, by Harley-Davidson and Energica brands, that were analyzed apart from the others. High-end models with sport-bike or power cruiser type chassis, which cost as much as a car, they target sportive and speed appreciators, with longer ranges and more powerful motors. (Table 19, Appendix 5)

Regarding the availability of the models, from the categories explained above, in the Portuguese market, they are mostly sold to the Portuguese consumer through two intermediary retailers called Zeev (which sells the Energica - Ego, Brammo - Empulse, Zero's models, Govecs and Ventrix brands) and ZevTech (which has available Energica - Ego, Volta's models and Brammo's Empulse and Enertia). Both of these retailers practice the same prices for the same models. Most of the options available in the scooter category are sold by their own brands (Peugeot, BMW, etc.) or through unofficial retailers like Ecogladly. The Butalco – Brinco can only be ordered from Spain. The Harley-Davidson model is still not available for purchase.

6.2 Portuguese market attractiveness

The Portuguese motorcycle industry characteristics are very similar to the European ones, with the followed differences.

6.2.1 Suppliers - Raw materials and components manufacturers

The supplier analysis is the same as the European, due to the fact that the components needed to assemble a motorcycle, are EU made. The difference is that almost every component has to be imported because there are not many Portuguese suppliers, especially electric motor manufacturers for motorcycles, which could increase supplier power.

6.2.2 Buyers - Motorcycle dealers

For the electric market in Portugal, there are some dealers that sell electric scooters form different brands, besides the big franchised dealers. There's only one physical store dealer that sells standard type of motorcycle besides their online store: Zeev. They sell Zero and Brammo brands. The other dealer (Zevtech) only sells online, and deals Volta and Brammo brands. Dealership/buyer power is increased by this conditions.

6.2.3 Competitive Landscape

Regarding electric motorcycle, there are fewer competitors. There are three brands specialized in electric motorcycles available in the Portuguese market: Brammo, Zero and Volta, and several others that have electric options: BMW, Peugeot, Govecs, Ventrix, Butalco, KTM, amongst others.

The options in the second group are mostly scooters with exception of KTM and Butalco that are trial or dirt-bikes. There are three direct competitors, none Portuguese and all represented by third party online retailers, which makes this an attractive sector.

6.2.4 Entry barriers

In Portugal, the same legislation and high setup costs affect new comers, as well the know-how necessary and supplier availability. The learning curve and economies of scale can also take some time to be established, but surpassing this restrictions there is no other constraint as we can see from the high number of brands available.

6.2.5 Threat of substitutes

There's still not a second hand electric motor-cycles market as it is still a novelty product. There are some electric scooters available in this used market. In cities there's still people that use it as primarily way of transport.

6.3 Opportunity and challenge

As Joel identified, there was an opportunity in this market. He had the know-how and the right connections to make this projects viable, supported by a favorable environment and the features described above. As seen before, it's a market that is low on electric offers and none is Portuguese. The fact that Famel is a Portuguese brand, has already some insights and traction from the people and carries all this background with its name, could be a strategic leveraging differentiator for its success.

Besides the obvious difficulties of financing this kind of projects in Portugal, the definition of the target consumer for the initially projected model - XF-17 - will be a fundamental starting point when thinking about the company's strategic positioning and focus when communicating about the product.

The research that follows will assess the extent and impact of this competitive advantage in Famel's new strategy and possible insights about positioning the brand and targeting the right

clients. To leverage on brand equity, can be one of the weapons Famel should use to be successful. The two following chapters will use the results to support future strategic decisions.

7. Market Research

In order to assess consumer insights about the motorcycle industry in Portugal and evaluate their opinion about brands and FAMEL in particular, it was done a survey that tried to gather as much information possible. The questions tried to gather information both needed and requested by Famel and for the extent analysis of this study.

7.1 Methodology

The online survey was developed using the Qualtrics Online Survey Software & Insight Platform, as can be seen on the Appendix 1. It was distributed over social networks, email and FAMEL's newsletter and Facebook page to a sample of 1200 respondents of which 680 were validated.

Due to the fact that the survey was shared in FAMEL social network the answers could be somehow biased regarding brand recognition and knowledge.

From the 1200 respondents, there were 520 non usable answers due to lack of survey completion. The respondent sample had no restrictions regarding the population, other than being over 16 years old – the minimum age required to have a 50cc motorcycle in Portugal. The respondents were formed by a mix of population from the student network and company newsletter subscribers and social media followers.

The respondents were all Portuguese.

7.2 Survey Results: Portuguese consumer insights

7.2.1 Demographic questions insights:

From the 680 validated answers, 95% were male, existing 31 female respondents.

From the question about respondent age, results showed 26% had between 16 and 24 years; 38% had between 25 and 34 years; 27% were between 35 and 44 years old; 7% was between 45 and 54

years old; and 2% had 55 years or more. (Appendix 2, Figure 7) Generally speaking, 91% of the respondents were 44 years old or younger or/and 64% of the respondents were 34 or younger.

Responding to the income question, the sample was distributed in the following way: 53% of the respondents had annual income below €20,000 (20k); 23% were between 20k and 30k income; 12% had 30k-40k annual income; and 13% had 40k or more annual income values. (Appendix 2, Table 8)

45% of the respondents lived in the city; 14% in city suburbs; 20% in towns; 17% in villages; and 4% in the countryside. (Appendix 2, Figure 8)

From the 130 respondents that answer the question about the possibility of purchasing the new model with value 10 (extremely interested), 99% were male, with age distribution similar to the whole sample (94% below 44 years old) and 82% had annual income below 30.000€. Regarding place of leaving of this 130 respondents, 39% leave in the city, 25% in a town and 25% in a village.

7.2.2 Quantitative and psychographic questions:

When asked about the daily average kilometers, respondents answers were: 19% below 10km distance; 26% between 10-20km ; 25% between 20-40km; 15% responded between 40-60km; 10% responded between 60-100km; and 5% responded over 100km. (Appendix 2, Figure 9)

71% of the population had a motorcycle, 198 respondents didn't have one.

From the 482 respondents that had a motorcycle, 18% said it was the only mean of transport they had; 15% said it was their most used mean of transport; 55% said they only use it in some situations; 11% responded they only use it in rare occasions; and 1% said they didn't use it anymore. (Appendix 2, Figure 10)

When asked about a situation they would buy a motorcycle for themselves, using the same attributes used to classify the brands , the five attributes respondents valued more were quality mechanics (479), reliability (419), maintenance/upkeep (382), accessible price (356) and efficiency/economy (265). The five least valued attributes were social status (25), traditional (41), customization (89), environmental friendly (89) and classic (117). (Appendix 2, Figure 12)

From the 130 respondents that answer the question about the possibility of purchasing the new model with value 10 (extremely interested), Figure 4 shows their daily average km distribution.

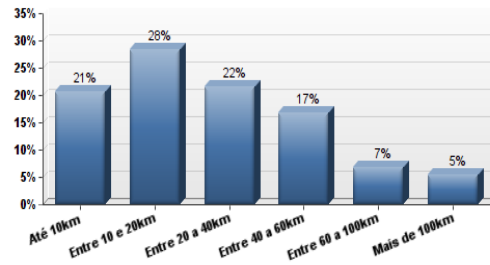


Figure 4 - Daily average Km Distribution for 130 most interested respondents in purchasing new model

96 had motorcycle, 34 didn't

From the 96 people that have a motorcycle, Figure 5 shows their rate of usage.

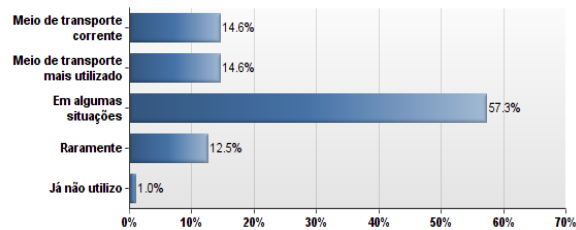


Figure 5 - Rate of usage (%) for the 96 motorcycle owners, from the 130 most interested in purchasing respondents

The most valued attributes for this 130 respondent sample were quality mechanics, maintenance/upkeep, reliable and accessible price. The least valued were customization, traditional and social status.

From the people who specifically live in the city, that has a motorcycle, there is an increase of utilization frequency in the “most used mean of transport” and “only mean of transport” categories of more than 3% in each. For this people, in the average kilometers question, there's a 5% increase in the 20-40km category.

7.3 Famel's Brand Equity

To understand how Famel could leverage on its brand recognition, awareness and knowledge, the survey compiled some brands perception questions. The results were as follows.

7.3.1 Brand recognition

Regarding brands recognition, 100% of the population has at least one brand, from the choices available, that they have heard of. No brand had 100% reckoning from total population. The most known ones were FAMEL - 95%, Honda – 92% and Yamaha – 91%. The least recognized brands

were the electric ones: Brammo and Zero brands had 10% recognition and Volta 7%. (Appendix 2, Figure 11)

The next question tried to filter the people that had some kind of information (regarding motorcycle models, brand information, brand insights, brand opinions, etc) about the brands known. From the 680 respondents that knew the brands in the previous question, 36 had no further information about any of the brands. From the 643 (95%) sample that knew FAMEL in the previous question, 553 had some kind of information about it (86%). (Appendix 2, Figure 11)

96% of the 130 respondents had heard about FAMEL. From those 125 that heard about FAMEL, 117 have some kind of information about it.

7.3.2 Brands perceptions

The following questions were used to get consumer insights and perceptions about the brands they had some information on. The respondents were presented with three random brands from the total brands they knew and had to associate three attributes they thought best describe the brand. The attributes were: design, style, quality mechanics, social status, modern, classic, sportive, traditional, historic, accessible price, reliable, comfortable, customizable, efficiency/economic, environmental friendly and maintenance/upkeep. This way the insights/opinions about each brand were evenly distributed through all brands presented. Table 9, Appendix 2, summarizes the attribute distribution and performance by brand.

7.3.2.1 Imagery and Performance associations

Famel (TR – 115) was best described with historic (54%), classic (45%) and quality mechanics (37%). It was least described as modern (0%), environmental friendly (0%) and customizable (1%).

7.3.3 XF-17 new model insights

After knowing brands perceptions, it was important to refocus on Famel's new model and assess the insights of the respondents regarding the evaluation of the new XF-17 prototype just by looking at the picture of the motorcycle future design and no other information.

7.3.3.1 Perceived Judgments and feelings

They were to evaluate it, in a scale between 1 and 7 (1 – extremely negative evaluation; 7 – extremely positive evaluation) regarding design, style, expected mechanics, social status, modern, classic, sportive, traditional, expected price, expected reliability, expected comfort, expected efficiency/economic, environment friendly, expected customization and expected maintenance/upkeep. The average opinion was positive (average = 4.82), no attributed had an average classification below 4 or over 6. The highest evaluated attributes were style (5.4), design (5.3) and modern (5.1). There was also a high perception (4.95) on expectable customization. Note that the previous attributes are more related to the visual perceptions attained from the observation of the image. The lowest evaluated attributes were expected comfort (4.23), environmental friendly (4.43) and expected price (4.57). (Appendix 2, Figure 13)

After presenting respondents just the image of the prototype, they were asked the same question regarding the same attributes and scale, but this time, they were given some information about the new model target characteristics: 125cc-equivalent electric motor, breaks with ABS system, limited production, European components, guarantee and range around 100km. The highest evaluated attributes were environmental friendly (6.18), efficiency/economic (5.69), modern (5.54), design (5.22) and style (5.11). The lowest evaluated attributes were traditional (4.97), classic (4.09) and expected price (4.23). Figure 14, Appendix 2, describes the differences between the two questions, in black - after information and blue - before information (total average difference was +0.2 perceived quality). The main positive differences in respondents opinion were regarding environmental friendly (1.8 average difference), efficiency/economic (0.9 average difference) and modern (0.4 average difference). The main negative differences in respondent's opinions, regarding the attributes, after knowing information about the new model, were traditional (-0.8 average difference), classic (-0.6 average difference) and with the same negative average variation of -0.4 the sportive and expected price.

For the 130 respondents that answer the question about the possibility of purchasing the new model with value 10 (extremely interested), their opinion, regarding the new XF-17 prototype with no information, on average, was 5.80 out of 7 (compared with 4.82 of the whole sample), with emphasis on style, design and modern. Expected comfort, expectable price and environmental friendly were the worst rated attributes.

When information about the new model is disclosed, the average rating was 5.81 out of 7, a slightly increase in average opinion. The best rated attributes were environmental friendly, modern and design. The least rated attributes were expected price, classic and traditional.

Note that even the not so well perceived attributes rating was above rating 5 in 7, so a positive evaluation of the prototype.

7.3.4 Traction

Finally, it was important to know the level of brand connection and perceived value attributed to the product.

87% of the respondents consider that the new model should be priced below 5,000€. Almost half think it should be priced below 3,000€. (Table 10, Appendix 2)

Following up the previous information, the aim was to comprehend the extension of change in price perceived when respondents get the information that this model was of Portuguese design, Portuguese brand, assembled in Portugal, maintaining the a brand tradition that dominated the market for three decades. (Table 11, Appendix 2)

There was an increase of 1% in the price perceived range of 5,000€-6.999€. The mean value is higher (1.70 to 1.72) so we can assume that there is some perceived added value to the brand by being Portuguese. (Table 12, Appendix 2)

For the 130 most interested respondents, Regarding price, without knowing the brand is Portuguese, the distribution was 58% below 2.999€, 35% between 3.000€ and 4.999€, 5% between

5.000€ and 6.999€, 2% between 7.000€ and 8.999€, and 0% above 9.000€. After knowing the motorcycle was Portuguese there was a 2% increase on the above 9.000€ perceived price, and a 2% increase in 5.000€ to 6.999€ price range.

Next, it was tried to assess the traction and the degree of interest in this new model, taking into account all the information previously given.

When asked, if they initiated a motorcycle purchase process, how interested, in a scale of 0 (not interested) to 10 (extremely interested), the respondents were, in considering the purchase of this motorcycle among the available options, the responses were as seen in Figure 15, Appendix 2. 56% of the respondents would consider the purchase of this model, among the available options. 4% would not consider it. 19% would consider it for sure. 21% would not, probably, consider it as a viable purchase option.

Using the same scale as the previous question, this one tried to assess the extent to which the respondents would recommend this model to a known person that was initiating a motorcycle purchase process. Only 2% would not recommend this model to a known person. 15% would probably not recommend. 57% would probably recommend it and 25% of the respondents would recommend it for sure. (Figure 16, Appendix 2)

When comparing both insights about considering the purchase or recommending the new model the values were as seen in Table 13, Appendix 2: There was a higher mean value in the second question, leaving the conclusion that people were more willing to recommend the model than to consider it as an option if they ever intended to purchase a new motorcycle.

From the 130 most interested respondents, 90% would recommend it to a known person that would initiate a motorcycle purchase process.

Conclusions

Regarding the analysis performed above, a summary of the conclusions will be made in the following chapter.

1. Is the European and Portuguese motorcycle market attractive for a new business?

Porter's 5 forces Market attractiveness summary: Europe Portugal									
Competition		Supplier Strength		Buyer Power		Entry Barriers		Substitutes	
Europe	Portugal	Europe	Portugal	Europe	Portugal	Europe	Portugal	Europe	Portugal
Low			Moderate				High		

Figure 6 - European/Portuguese Market Attractiveness resume. Source: Author based on case

Market wise, the Portuguese motorcycle industry characteristics are very similar to the European, as it is a component of this market. There's a clear sign of market growth since 2014, for both motorcycle markets in Portugal and Europe, mostly in the above 125cc category. The forecast until 2019 is a positive 3.2% CAGR growth of the industry. The electric market also grew in 2014-15 period, and is expected to grow even more in 2016, thus to the brands adaptation to the European legislation.

Regarding electric motorcycle, there are fewer competitors. There are three brands specialized in electric motorcycles available in the Portuguese market: Brammo, Zero and Volta, and several others that have electric options: BMW, Peugeot, Govecs, Ventrix, Butalco, KTM, amongst others. The options in the second group are mostly scooters with exception of KTM and Butalco that are trial or dirt-bikes.

For FAMEL, the supplier analysis is the same as the European, due to the fact that the components they hope to use, are EU made. The difference is that almost every component has to be imported and there are few electric motor suppliers for motorcycles, which could increase supplier power.

For the electric market in Portugal, there are some dealers that sell electric scooters form different brands, besides the big franchised dealers. There's only one physical store dealer that sells Zero and Brammo motorcycles besides their online store: Zeev. The other dealer only sells online, and deals Volta and Brammo brands. Dealership/buyer power is increased by this conditions

In Portugal, the same legislation and high setup costs affect new comers, but surpassing this restrictions there is no other entry challenge for FAMEL.

In Portugal there's still not a second hand electric motor-cycles market as it is still a novelty product. There are some electric scooters available in this used market.

2. What are the characteristics of the FAMEL company/brand?

From the information collected along the case, we can conclude that FAMEL brand was very successful in its golden years (70s, 80s), being its models, top sellers among motorcycles at that time. They had perceived quality of construction, durability, maintenance and were easily changed for better performances.

Famel Company has a big history and tradition in Portugal. The brand has a stable and nationwide knowledge formed by owners, supporters, fans, collectors and motorbike lovers as seen by the big buzz generated after the revival disclosure. Even people that don't have motorcycles may have heard about this brand.

Results showed it was best described as historic, classic and having quality mechanics.

3. What are competitor's product characteristics and brand knowledge?

Through the analysis of the competition we can conclude that there are some product clusters in the Portuguese electric motorcycle market. There are three well defined electric motorcycle clusters plus one and Famel has already decided in which segment its new model will first compete. The most similar models to the expected XF-17 available are the ones from Zero, Volta and Brammo. The similarities in terms of aspect, size, weight, power and range, contribute for the insertion of the new Famel model in the category of standard roadster type chassis motorcycles. This motor-cycles target people that value power, adaptability to several terrains, robustness of the build and are able to afford expensier models.

The top selling motorcycles in Portugal in 2015 were Honda, Yamaha, Keeway and Sym.

For this brands, success can also be explained through their products characteristics. Consumers key attribute associations to this brands were quality mechanics, reliability, efficiency/economic and accessible price.

The most valued attributes by costumers when evaluating motorcycles characteristics were quality mechanics, reliability, maintenance/upkeep, accessible price and efficiency/economy.

This brands clearly position their models and supply to be align with consumer's most valued characteristics, therefore, some of their success is explained.

4. What should be Famel's target and positioning?

FAMEL should use a single segment targeting strategy. Focus on just one target, will enable product specialization and focus marketing efforts just for customers within this segment. Risk would also be reduced at a first approach to the market, due to the lower financial and company power FAMEL have.

Famel should promote their strategy, focus their marketing efforts and design their product regarding the following **target** characteristics:

Demographic:

- Daily average kilometers between 10 – 60 km
- Male
- Age between 25 and 34 years old
- Annual income below 30.000€
- Live in the city

Psycographic

- Hot rodders/Urban Riders
- Have a medium motorcycle usage or just use it in some situations
- Value quality mechanics, maintenance/upkeep, reliability and accessible price

Positioning

Brand associations regarding Famel position it as historic, classic and quality mechanics. There was no associations to modernity, environmental friendliness and customization.

Brand awareness and knowledge and key associations are crucial for brand appeal. Famel was rated highly in each of this aspects, revealing already tremendous potential regarding consumer's acceptance.

When exposed to new XF-17 prototype aspect and expected future characteristics, consumer's perception about modernity, efficiency/economic and environmental friendly were rated the highest.

With brand perceptions improved in the environmental friendliness and modernity, Famel is also having high ratings perception for three of the five most important attributes for consumers.

Note: There was a difference in the expected price for the new model after knowing it was Portuguese, but it was not statistically relevant and one can't conclude about the value perceived when a brand is Portuguese. The conclusion that might be outdrawn is that knowing this motorcycle brand is Portuguese, doesn't change consumer perception about product value.

5. What are the consumer insights about key brand equity elements?

To answer this questions it is needed to be familiar to Keller's Costumer-Based Brand Equity Pyramid model.

Salience analysis:

- Famel was the most recognized brand with 95% brand recognition and from this sample, 86% had some kind of information about the company or models.
- 96% of the 130 respondents that were most interested in acquiring the new model, had heard about FAMEL. From those 125 that heard about FAMEL, 117 have some kind of information about it.

Brand meaning analysis:

- Famel (TR – 115) was best described with historic (54%), classic (45%) and quality mechanics (37%). It was least described as modern (0%), environmental friendly (0%) and customizable (1%).

Brand responses analysis - In this case it was taken into consideration the perceptions of respondents concerning the new XF-17 model and its intended characteristics:

- Without knowing attributes the average opinion was 4.82 (1 – extremely negative evaluation; 7 – extremely positive evaluation)
- After knowing attributes the average opinion was 4.84
- For the 130 respondents that answer the question about the possibility of purchasing the new model with value 10, without knowing attributes, the average opinion was 5.80
- For the 130 respondents that answer the question about the possibility of purchasing the new model with value 10, knowing attributes, the average opinion was 5.81

Brand relationships or brand resonance analysis - New model intentions of purchase and recommendation are good indicators for brand resonance:

- 56% of the respondents would consider the purchase of this model, among the available options, of which 19% would consider it for sure.
- 57% would probably recommend it of which 25% of the respondents would recommend it for sure
- From the 130 respondents that would definitely consider the purchase of the motorcycle, 90% would recommend it to a known person that would initiate a motorcycle purchase process.

Teaching Notes

Synopsis

FAMEL Company was one of the major players in the Portuguese motorcycle industry between the 60's and late 80's, producing some of the best-selling motorcycles models for almost three decades. It went bankruptcy in 2002, after some court rulings regarding debts. In 2014, Joel Sousa, an automotive engineer, identified the opportunity and acquired the patents and rights of the brand. The company is not yet legally establish but JS is hopping to register it sometime near the launch of the new XF-17 prototype, the flagship product of the brand. The expectations are that this new electric motorcycle would be the right weapon to kick start the revival of the FAMEL Company.

In a market that has few electric motorcycles options available and where people are still reluctant in changing from cheaper petrol motorized vehicles to electric ones, can the historic heritage and strength of the buzz generated around the relaunch of the brand be sufficient for success? How to target the right consumer, leverage on the strength of the brand and develop consumers most valued motorcycle attributes, is the problem Joel Sousa is facing.

Target ad Audience of the Case

The "FAMEL revival Case Study: leverage on consumer insights" is adequate to Undergraduate, Master's and MBA Students in Business Administration, Marketing or Strategy in courses such as Strategic Marketing, Strategic Management, Brand Management or Advanced Strategic Management. It can be seen by different approaches depending on the focus of the subject.

Teaching Objectives/ Use of the case/ Relevance of Study

The case elaborates on the environmental and situational analysis about the motorcycle industry in Europe and more specifically in Portugal. In a more narrow approach, the case explains concepts about the electric motorcycle market and, for academic purposes, in strategical marketing field. The structure of the case study could help students to understand the steps needed to take before a company makes strategical decisions: from the problem statement and creation of the research questions, through market, environment and competition analysis, followed by the market research

and data analysis, till the description of the findings and the providence of recommendations to the company.

Teaching Plan

The case study should be divided in two different parts. The first part should include the analysis of the European and Portuguese motorcycle market, company information, the theoretical concepts about this industry more specifically the electric motorcycle market and, ultimately, theory on strategical marketing. After analyzing the problem and know the environment characteristics, the second part should divide the class in teams of students for an easier and further discussion of the case, in order to provide solutions an insights about the case.

The way to do it is to analyze the case from a broader view until reaching the core of the problem. Starting with some critical definitions about the motorcycle industry and then main trends in the Portuguese electric market and then focusing on more operational questions related with the company and the product FAMEL wants to deliver.

1. According with the case, describe the European and Portuguese motorcycle market characteristics that make it attractive/unattractive for a new company
2. Describe the strengths, weaknesses, opportunities and threats of the Famel Company
3. Describe the electric and non-electric competitors' products
4. Define Famel's target and positioning
5. Use Keller's CBBE definitions to analyze Famel brand equity

Recommendations

FAMEL would have three direct competitors, none Portuguese and all represented by third party online retailers, which makes this an attractive sector.

To make or integrate some part of the parts manufacturer process could bring Famel some advantage. In the past the motorcycles were assembled in Agueda, so to revitalize the old factory could lower some supplier strength.

To avoid loss of negotiation power, FAMEL could elaborate on a different retail strategy like their own online store, agreements with other motorcycles dealers that don't have standard electric types of motorcycles to sell, or even, own flagship stores.

Besides the know-how necessary and supplier availability, they already have an exceptionally high level of brand recognition allied with the capabilities of being totally green and assuming being cheaper than available options.

In cities there's still people that use motorcycles as primarily way of transport and there's not a secondary market for electric motorcycles with standard type of chassis, so FAMEL could leverage on this two factors.

The brand history, recognition, knowledge and perception is Famel's competitive advantage.

There's a clear segment where to develop brand business: the 125cc-equivalent motorcycle category with 11kW continuous power electric motors, and using standard type of chassis.

This market segment has a bigger target audience thanks to the A1/B license requirements, and fulfills a need in terms of motorcycle class, since the available 125cc electric equivalent options are mostly scooter type of motorcycle. Famel should focus all initial efforts on their MVP (minimum viable product) for this segment.

FAMEL should use a single segment targeting strategy. Focus on just one target, will enable product specialization and focus marketing efforts just for customers within this segment. Risk would also be reduced at a first approach to the market, due to the lower financial and company power.

If Famel is able to maintain some of the key associations perceived by consumers and improve some of the lower rated ones, there is clearly a competitive advantage towards electric competitors that are rated very low in each of this brand associations.

When exposed to new XF-17 prototype aspect and expected future characteristics, consumer's perception about modernity, efficiency/economic and environmental friendly were rated the

highest. If Famel is able to ally this characteristics, with the already well perceived historic associations of quality mechanics, and ultimately charge a lower price to consumers, there's a real possibility of success.

With brand perceptions improved in the environmental friendliness and modernity, Famel is also having high ratings perception for three of the five most important attributes for consumers and, if efforts focus in improving reliability and maintenance/upkeep of the product, they will have a winning product.

Limitations

For the purpose of this study, the most difficult part was to collect non biased primary data from the survey. The respondents were both from student connections network and Famel's social network, so the sample could be somehow biased about brand recognition and not representative of a random population. There are several questions about brand insights that were left out, that could be better used for Keller's Brand Equity Model (Customer-Based Brand Equity) definitions, and that could have helped structure consumer relations and knowledge about Famel. To explore the extent of each CBBE Pyramid dimensions, the survey had to be longer and boring for respondents, and some of the questions that at this stage were more important to Famel (like the average Km) had to be left out. The information was not statistically treated in any statistical platform (SPSS or STATA), so there could be some information that isn't statistically relevant.

As the electric motorcycle market is still in its yearly stages, there is low information about market volume, value and characteristics. Established electric motorcycle companies like Brammo and Zero were not allowed to disclose information.

Due to the fact that Famel isn't a company yet, and doesn't have a clear strategy plan defined, it was important that the focus of this study was made to support initial decisions of the brand. It could have been done a proposal to Famel on how they could perform in each of the 4 P's or even 7 P's dimensions, but a preliminary market and situational research had to be made to support and base these future decisions.

Future research

As said before it would be important to Famel to get a further knowledge about consumer's brand insights, using the CBBE Pyramid dimensions for that assessment.

To treat the collected information on the survey, in statistical platforms, could also reveal some important information to Famel.

Based on the collected information in this study, it could be important to develop a company strategy using the marketing mix P's framework and defining objectives, visions, goals and company culture.

It could also be important to benchmark successful similar rebranding and re-launching cases like the Indian, Mini, Fiat 500 and electric product strategies like Tesla and BMW i series.

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Appendixes

Appendix 1: Questionnaire

Famel Survey

Anonymous and if possible, the sample should not be familiar with the new prototype.

Dear respondent,

Welcome!

The purpose of this questionnaire is to obtain information about the perceptions of consumers on the Portuguese motorcycle market.

I am a Master's student finishing my Strategy and Entrepreneurship degree at the Portuguese Catholic University and all information obtained will be used for the realization and completion of my master's thesis.

All responses will be anonymous and confidential.

The completion of the questionnaire will take for about 6 min.

Q1. How many kilometers do you do daily, regardless of the mean of transport?

- Up to 10km
- Between 10 and 20km
- Between 20 and 40km
- Between 40 and 60km
- Between 60 and 100km
- Over 100km

Q2. Do you currently own a motorcycle? Y / N

Q2.1. If yes - How often do you use it?

- Current mean of transport
- Most used mean of transport
- In some situations
- Rarely
- I do not use anymore

Q3. Which of these brands have you heard of:

- Honda
- Keeway
- Yamaha
- Sym
- Famel
- Kymco
- Piaggio
- Kawasaki
- KTM
- Harley-Davidson
- Ducati
- BMW
- Brammo
- Volta
- Zero
- Bultaco

Q3.1. From the brands selected, on which do you have some kind of detail? (Seen any model, know information about the brand, has an opinion on their motorcycles, etc.) (There will be a filter on the questionnaire that will only assess the brands known in question 3.)

- Honda
- Keeway
- Yamaha
- Sym
- Famel
- Kymco
- Piaggio
- Kawasaki
- KTM
- Harley-Davidson
- Ducati
- BMW
- Brammo
- Volta
- Zero
- Bultaco

Q3.1.1. Which are the three attributes that best describe the "brand" in the motorcycle market? (In this question there is a filter from the brands indicated in question 3.1. Respondents would evaluate only three of the total number of brands they knew, with a distribution of responses/opinions by the total brands available.)

- Design
- Style
- Quality Mechanics
- Social Status
- Modern
- Classic
- Traditional
- Historic
- Sportive
- Affordable price
- Reliable
- Comfortable
- Customizable
- Economic/efficiency
- Environmentally friendly
- Maintenance/upkeep (easiness of finding parts, repairs, maintenance costs, warranty, after-sales service)

Q4. In a situation that you would decide to buy a new motorcycle for you, from the following attributes, select the five (5) that would have more influence on your choice (Pick & drag):

- Design
- Style
- Quality Mechanics
- Social Status
- Modern
- Classic
- Traditional
- Historic
- Sportive
- Affordable price
- Reliable
- Comfortable
- Customizable
- Economic/efficiency
- Environmentally friendly
- Maintenance/upkeep (easiness of finding parts, repairs, maintenance costs, warranty, after-sales service)

Q5. (Image of the new motorcycle) How would you rate this bike, regarding the following characteristics, only resorting to the image and not knowing other information? (1 being an extremely negative evaluation and 7 an extremely positive evaluation)

- Design
- Style
- Expected Mechanics
- Social Status
- Modern
- Classic
- Sportive
- Traditional
- Expected Price
- Expected reliability
- Expected comfort
- Expected efficiency/economic
- Environmentally friendly
- Expected Customization
- Expected maintenance/upkeep (easiness of finding parts, repairs, maintenance costs, warranty, after-sales service)

Q5.1. (Image of the new motorcycle) Assuming that these are some of the characteristics of the motorcycle:

- Electric (125cc-equivalent)
- ABS brakes
- Limited production
- European Components
- Warranty
- Range close to 100km

How would you rate this bike NOW, in the following characteristics? (1 being an extremely negative evaluation and 7 an extremely positive evaluation)

- Design
- Style
- Expected Mechanics
- Social Status
- Modern
- Classic
- Sportive
- Traditional
- Expected Price
- Expected reliability
- Expected comfort
- Expected efficiency/economic
- Environmentally friendly
- Expected Customization
- Expected maintenance/upkeep (easiness of finding parts, repairs, maintenance costs, warranty, after-sales service)

Q5.1.1. Given these characteristics which would be the perceived price of the motorcycle?

- <€ 2.999
- € 3.000 - € 4.999
- € 5.000 - € 6.999
- € 7.000 - € 8.999
- > € 9.000

Q5.1.2. (Image of the new motorcycle) Knowing this motorcycle is Portuguese designed, Portuguese brand and assembled in Portugal, maintaining a tradition that dominated the market for more than three decades, what is the perceived price?

- <€ 2.999
- € 3.000 - € 4.999
- € 5.000 - € 6.999
- € 7.000 - € 8.999
- > € 9.000

Q6.1. If you started a motorcycle acquisition process, how interested would you be to consider this model from the available options? (0 being not at all interested and 10 extremely interested)

(Interest chart from 0 to 10)

Q6.2. Would you recommend this motorcycle to friends, family or acquaintances starting a motorcycle acquisition process? (0 being not at all interested and 10 extremely interested)

Demographic:

Q7. Sex: M or F

Q8. Age:

- 16-24
- 25-34
- 35-44
- 45-54
- 55+

Q9. Household Annual Income (€):

- <20,000
- 20000-30000
- 30000-40000
- 40000-50000
- 50000-60000
- > 60,000

Q10. Housing location:

- City
- City Suburbs
- Town
- Village
- Countryside

Thank you for your time!

Appendix 2: Market Research – Survey Graphical Results

Demographic Questions:

Q8. Age distribution:

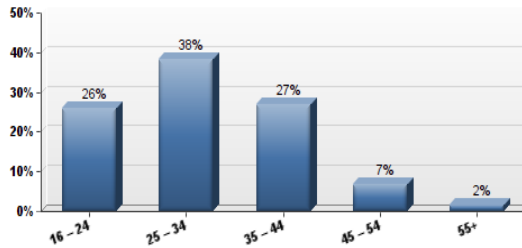


Figure 7 - Age Distribution

Q9. Household Annual Income (€):

#	Answer	Response	%
1	<20.000	358	53%
2	20.000 – 30.000	154	23%
3	30.000 – 40.000	79	12%
4	40.000 – 50.000	41	6%
5	50.000 – 60.000	13	2%
6	>60.000	35	5%
	Total	680	100%

Table 8 - Household Annual Income (€)

Q10. Housing location:

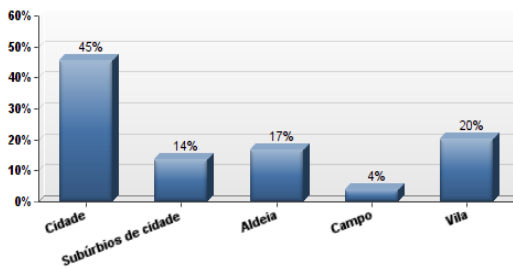


Figure 8 - Housing Location

Quantitative questions:

Q1. How many kilometers do you do daily, regardless of the mean of transport?

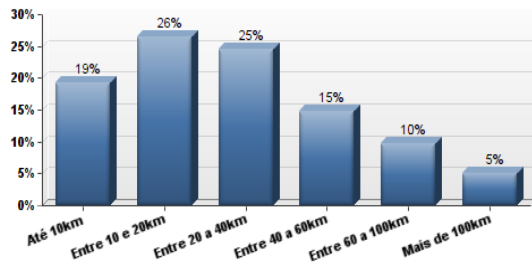


Figure 9 - Daily Average Km

Q2.1. If yes - How often do you use it?

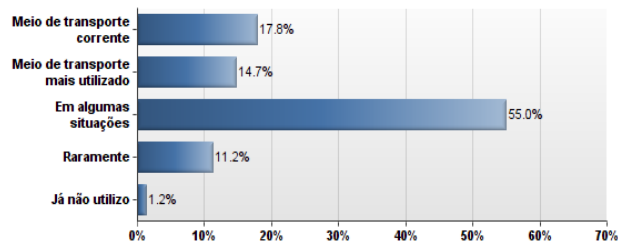


Figure 10 -Motorcycle Rate of Usage

Q3. Which of these brands have you heard of:

Q3.1. From the brands selected, on which do you have some kind of detail? (Seen any model, know information about the brand, has an opinion on their motorcycles, etc.) (There will be a filter on the questionnaire that will only assess the brands known in question 3.)

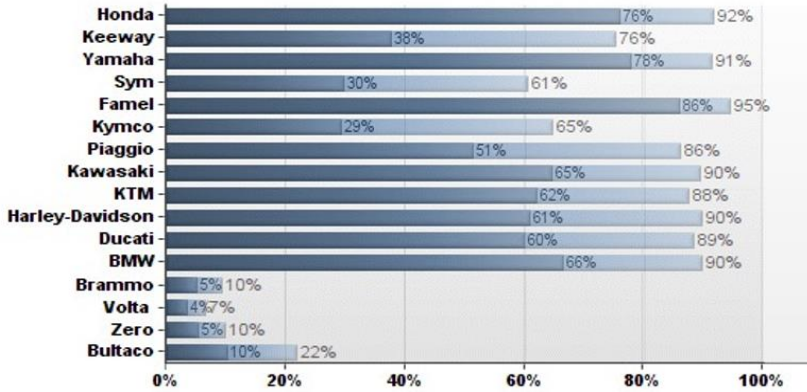


Figure 11 - Which of these brands have you heard of? (Light Blue)

From the brands selected, on which do you have some kind of detail? (Dark Blue)

Q3.1.1. Which are the three attributes that best describe the "brand" in the motorcycle market? (In this question there is a filter from the brands indicated in question 3.1. Respondents would evaluate only three of the total number of brands they knew, with a distribution of responses/opinions by the total brands available.)

Brands	Attributes															
	Design	Style	Quality Mechanics	Social Status	Modern	Classic	Sportive	Traditional	Historic	Accessible Price	Reliable	Comfortable	Customizable	Efficiency/Economic	Environmental Friendly	Maintenance/Upkeep
Honda	30%	18%	73%	3%	13%	2%	39%	6%	14%	7%	54%	12%	2%	6%	2%	20%
Keeway	29%	13%	1%	1%	17%	2%	4%	5%	0%	92%	11%	13%	4%	76%	9%	24%
Yamaha	29%	20%	61%	2%	19%	3%	51%	6%	7%	15%	39%	9%	9%	13%	0%	17%
SYM	19%	10%	10%	1%	29%	1%	5%	6%	0%	83%	20%	13%	1%	69%	8%	24%
Famel	17%	22%	37%	3%	0%	45%	9%	24%	54%	13%	32%	3%	1%	24%	0%	15%
Kymco	16%	8%	10%	2%	16%	1%	4%	9%	0%	89%	15%	20%	1%	74%	7%	27%
Piaggio	32%	46%	22%	10%	6%	46%	1%	16%	38%	13%	16%	11%	4%	27%	1%	10%
Kawasaki	53%	24%	59%	6%	30%	2%	70%	1%	5%	4%	29%	6%	4%	3%	0%	4%
KTM	42%	38%	55%	8%	27%	0%	66%	1%	2%	2%	34%	6%	10%	4%	0%	5%
Harley-Davidson	34%	69%	25%	37%	1%	39%	1%	7%	48%	0%	7%	7%	23%	0%	0%	1%
Ducati	73%	51%	32%	27%	20%	2%	59%	0%	20%	2%	7%	1%	1%	1%	0%	1%
BMW	47%	27%	59%	36%	23%	4%	19%	3%	11%	0%	41%	20%	5%	1%	1%	3%
Butalco	32%	37%	22%	8%	2%	69%	20%	25%	69%	0%	7%	2%	0%	2%	3%	0%
Brammo	48%	12%	18%	9%	45%	0%	30%	0%	0%	3%	3%	0%	0%	48%	79%	3%
Volta	57%	9%	4%	4%	30%	0%	9%	0%	0%	9%	4%	4%	0%	65%	96%	9%
Zero	26%	15%	24%	12%	53%	0%	6%	0%	0%	6%	0%	0%	6%	65%	79%	9%

Table 9 - Brand Attributes Performance. Source: Author

Q4. In a situation that you would decide to buy a new motorcycle for you, from the following attributes, select the five (5) that would have more influence on your choice (Pick & drag):

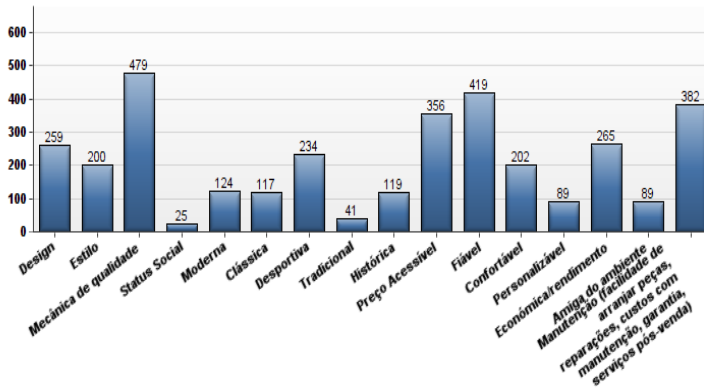


Figure 12 - Most valued Attributes

Q5. (Image of the new motorcycle) How would you rate this bike, regarding the following characteristics, only resorting to the image and not knowing other information?

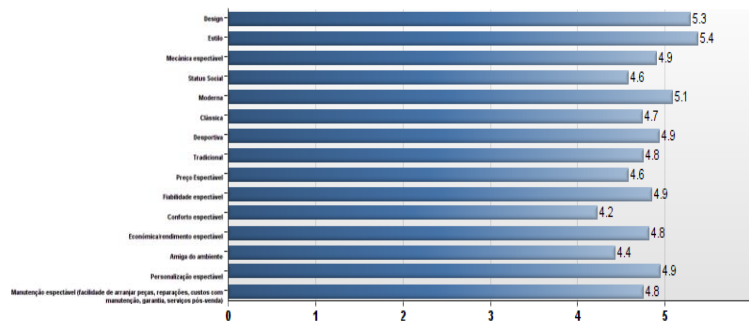


Figure 13 - New Model characteristics perceived Evaluation (1 being extremely negative evaluation and 7 an extremely positive evaluation)

Q5.1. (Image of the new motorcycle) Assuming that these are some of the characteristics of the motorcycle, how would you rate this bike NOW, in the following characteristics?

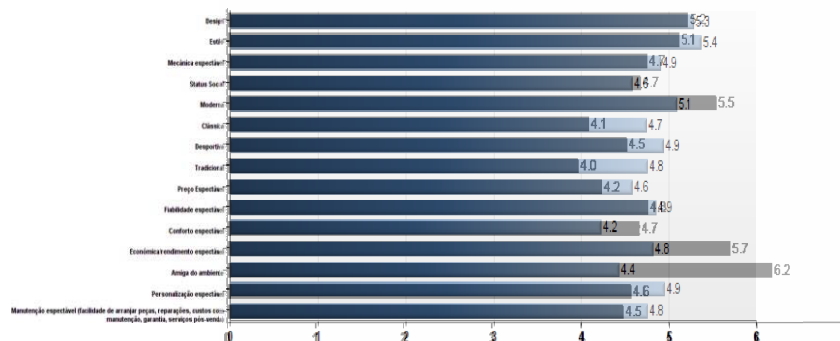


Figure 14 - New Model characteristics perceived Evaluation difference after knowing motorcycle characteristics (1 being extremely negative evaluation and 7 an extremely positive evaluation)

Light Blue – Perception without knowing characteristics

Grey/Dark Blue – Perception after knowing characteristics

Q5.1.1. Given these characteristics which would be the perceived price of the motorcycle?

#	Answer		Response	%
1	<2.999€		325	48%
2	3.000€ - 4.999€		268	39%
3	5.000€ - 6.999€		57	8%
4	7.000€ - 8.999€		25	4%
5	>9.000€		5	1%
	Total		680	100%

Table 10 - Perceived Price

Q5.1.2. (Image of the new motorcycle) Knowing this motorcycle is Portuguese designed, Portuguese brand and assembled in Portugal, maintaining a tradition that dominated the market for more than three decades, what is the perceived price?

#	Answer		Response	%
1	<2.999€		327	48%
2	3.000€ - 4.999€		257	38%
3	5.000€ - 6.999€		64	9%
4	7.000€ - 8.999€		25	4%
5	>9.000€		7	1%
	Total		680	100%

Table 11 – Perceived Price after knowing model is portuguese

Statistic	Value: Question no Portuguese	Value: Question if Portuguese
Min Value	1	1
Max Value	5	5
Mean	1.70	1.72
Variance	0.69	0.74
Standard Deviation	0.83	0.86
Total Responses	680	680

Table 12 - Mean value and variation before and after knowing motorcycle is Portuguese

Q6.1. If you started a motorcycle acquisition process, how interested would you be to consider this model from the available options?

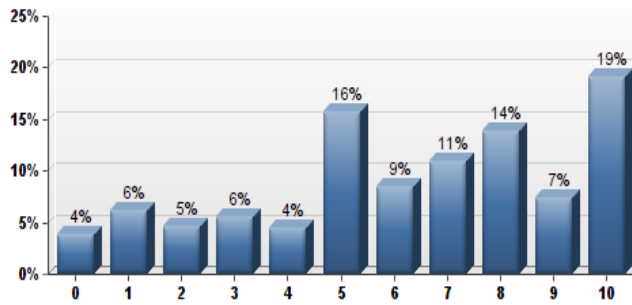


Figure 15 - Interest demonstrated in the new motorcycle (0 being not at all interested and 10 extremely interested)

Q6.2. Would you recommend this motorcycle to friends, family or acquaintances starting a motorcycle acquisition process?

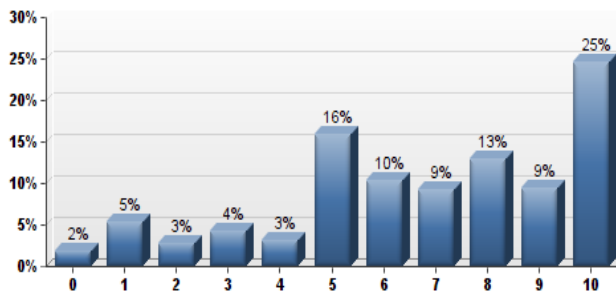


Figure 16 - Interest demonstrated in recommending new motorcycle (0 being not at all interested and 10 extremely interested)

Statistic	Value - Purchase	Value - Recommend
Min Value	0	0
Max Value	10	10
Mean	6.24	6.77
Variance	8.83	7.93
Standard Deviation	2.97	2.82
Total Responses	680	680

Table 13 – Willingness to purchase vs recommend

Appendix 3: Interview Guidelines to Joel Sousa, Famel Project responsible

Interview Famel - Joel Sousa

Study about strategic analysis on Famel Brand relaunch, March 2016.

Below, there's some questions that I would like you to answer using as much information possible and sincerely. The questions will be used to make a situational analysis of the brand, to know what information you dispose and what your intentions are. To know your objectives, identify brand weaknesses and strengths. The information will be a great indicator for the way forward and to acquire basic information about the market and segment.

The interview was made in Portuguese, and then translated to English. Some Portuguese expressions can have deficient translations.

01 - How did the project to revitalize the Famel brand start, and why the XF-17 model?

I identified the fact that the previous owner was negotiating the rights to the brand, as a great opportunity. In terms of brand value, the vision I had for it and the technical capacity at the time made me come up with a proposal, which after negotiations, was accepted. About the XF-17 model, it could not be otherwise. I always give the same example of Mini, VW and Fiat, that did the same with their most charismatic or emblematic models, so the XF-17 had to be the first to return.

02 - Who is part of this project?

The project, by August 2015, was only composed by me with the help of a person who was willing to make some prototype sketches and Primariu that developed the website. In August we had two more people connected to the financing of the brand, to leverage its potential and help come up with the first prototype.

03 - Where are you established?

Regarding the last answer and that there is still not a registered company, the objective is, to be established in Agueda. In terms of marketing and history it will be quite beneficial to "return to the origins".

4 – How would you define Famel brand (Zundapp) before it was discontinued? How do you define/would like to define it now?

The Famel brand in the past, regarding the feedback I had, was the "motorcycle of the construction worker" (Trolha); was seen as a vehicle for those who had few resources but needed to move, with the exception of the XF-17, which was more for the coffee people. They had the Spirit of the Café Racer. I had the opportunity to live close to it, because in the villages where my family lived, my younger uncles used the XF-17 to go to the cafe and then go for an afternoon stroll.

05 - How do you define the XF-17? What are its characteristics?

The XF-17 was a slim motorcycle, low and light weighted. It was the sport motorcycle of the poor. Very versatile and with enormous potential to have altered motor (not legally) to achieve superior performance. Today, and looking at the motor of the time, the impression it gives is that it was an advanced bike for its time, however, it is clear that all design and inspiration was based on the Suzuki Stinger T125, which was almost sufficient to become a success.

06 - What are the main differences and similarities between the "old" Famel and new, both at company level and XF-17 model?

I think the question should be reversed. What do they have in common with the old Famel? We started new but not from zero. We tried to use all the old graphics, letterings and logos. The objective is, the future Famel as a brand, with the help of the new XF-17 model, to be again a landmark in Portuguese industry. It was imperative that the first drafts transfigure all the DNA of the brand and bike to the new model and I think the designer managed to make a proposal that meets all expectations. At the company level it is assumed that the lack of vision for the future was one of the reasons for the failure of the factory and brand. That's why the new model that we are preparing, will not have a combustion motor, but an electric one. We are at a level where the technology is new and the electric market power begins to grow. We will compete with Chinese motorcycles that cost 2.000 euros, but we expect to have a quality motorcycle for the price of a Yamaha or Honda. This brands, will certainly have a lot more quality at first, but in the electric market, everyone is taking the first steps and prospects are that it will be the future.

07 - How was the process of acquisition of brand patents and project financing?

The acquisition of trademark rights was a normal process of transmission thereof. Funding, as mentioned, is now being done by people connected to Famel with focus on the prototype construction. Later, the future will tell, but I think it will not be difficult to get more funding for other flights.

08 - In which phase of the project are you now?

The project is in its procurement phase. We are contacting several suppliers to understand which the existing offers are better for us and who wants to collaborate in this project. It is not easy, but we hope to have all the materials defined by the summer.

09 - What are the difficulties you have been encountering?

We face difficulties in finding suppliers who want to embrace a project that does not have an annual production forecast of defined units. Outside Portugal, the working method is defined by projected units and orders. Here we accept everything when sometimes to do 5 or 6 units only brings losses.

10 - How do you analyze the motorcycles market in Portugal?

It is a very broad market. It's a little "undermined" by Korean and Chinese motorbikes and Honda and Yamaha have very competitive offers. By indicators, it is a growing market mainly in the range above 125cm³.

11 - How has been the feedback from people with the perspective of the brand coming back to activity and the new XF-17 model?

Overall it's positive. There are many comments, support and suggestions and you can see that everyone has high expectations about what is coming. I think we have a parochial culture and it gives us a sense of responsibility, because we will have all eyes on us when prototype discloses.

12 - Who would be the target consumer for the new XF-17?

We are working in every extent possible, from the young 16, to the person who goes to work every day and wants to save money, or even, those looking for some fun on the weekend.

13 - What are the short, medium and long term goals?

In the short-term, build prototype. On the medium term period, construct a sample of some pre-testing units to know the dimension, space and time needed for the mass production and on the long term, prepare the next model. We have optimistic perspectives but in the end, is the expected cycle of a company.

14 – Is there a prospect to build other models?

As said before, yes.

15 - What would be the price of purchase of the new model?

Being electric, obviously, the prices will be slightly higher than expected. As we are still in the detail phase, ideally, we expect to not exceed 7500€.

16 - Where would it be available? Physical store? Online?

The online market starts to be quite attractive, however we would need partners like authorized repairers meaning we will probably have to abdicate this perspective and have dealers, but it is too early for this.

17 - At present, is there already some idea on how the new model will be communicated and promoted?

Digital platforms are obviously the way to go. Website, videos and Facebook, will be the main platforms but we will, mainly try, that people will be close the development of the project. We want to show the evolution of the prototype, but not in great detail, in order to engage people and create a connection. It's something you do not see and can have pros and cons but for this model we can try.

18 - Could you describe an optimistic and pessimistic scenario for this re-launch of the brand?

Best case scenario would be the prototype to have many pre-orders or an international investor that wants to do more and better. Worst case scenario is to have a good receptivity to the product but it doesn't sell. You can have the best product, but if you don't sell it, it's worthless.

19 - Since the new model it is an electric bike, can we consider that it operates in the market of motorcycles below 50cc, 125cc or above 125?

I believe that the power level to which I want to compete is inserted in the 125cc class, but the price level of a 400cc.

20 - What are the characteristics of the new model in terms of materials, parts, manufacturing, autonomy, technology that you can use, customer service after purchase, warranty, or any other information you would like to know if you were to buy a bike?

Manufacturing is not yet defined but I want it to be simple and that most of the parts be made in Portugal. Obviously there are technologies, including engines and batteries, that don't exist in our country and we are already in negotiations with European suppliers (this is also important because components of China give a negative connotation to the product). The technology itself is normal, motor, batteries and controller, and the chemistry of the battery is still under study from our potential supplier. The rest, suspension, brakes, etc. will also be difficult to get in Portugal mainly the brakes with ABS, a fact that is an asset and that we want to have (we are also obliged to have them).

Regarding guarantees and after sales service is the subject that "keeps me awake at night" because people do not have the slightest idea of what it is to provide a product that has to work and if it breaks down, someone has to know how to fix it. I often say that, to do a motorcycle, I've could have done and presented a motorcycle made of scraps but it would not be my way of working. I contact suppliers to provide a product with technical manuals, troubleshooting, guarantees, who can make the system setups, accompanying approval steps and, if appropriate, present us with approval certificates. If we don't do this carefully, Famel appears and disappears after the first breakdown. Hence it is my biggest concern.

21 - How many subscribers you have on your website? Regarding the YouTube videos related to the project, how many views you have in total?

About 400 newsletter subscribers. At this point the channel totals 84 subscribers and 6547 views for 3 videos that we have uploaded.

22 - Do you have information regarding sales of Famel between the 60's and 90's?

Unfortunately, I don't.

23 – Have you set the power of the new model? And its range?

The equivalent nominal power is 11kW, which is the legal limit for driving license category A1. The engine that we are negotiating is close to that value. In electrical terms there is maximum power and nominal power, and for comparison purposes you should use the nominal power because for example a motor with 11kW can go up to 16 / 18kW of maximum peak power. Range will be around 80-100 km although this aspect is still under consideration, because a study we did, revealed that it is not justified having much capacity for a motorcycle to be used on a city circuit of maximum daily 35km. We may be "carrying batteries" in terms of weight vs. autonomy for nothing.

Appendix 4: Teaching notes

1. According with the case, describe the European and Portuguese motorcycle market characteristics that make it attractive/unattractive for a new company

Market wise, the Portuguese motorcycle industry characteristics are very similar to the European, as it is a component of this market. There's a clear sign of market growth since 2014, for both motorcycle markets in Portugal and Europe, mostly in the above 125cc category. The forecast until 2019 is a positive 3.2% CAGR growth of the industry. The electric market also grew in 2014-15 period, and is expected to grow even more in 2016, thus to the brands adaptation to the European legislation.

There can be done a parallelism of the European market characteristics regarding Porter's five forces analysis, to the Portuguese market situational analysis, with the differences described below.

Competition (Figure 25, Appendix 5)

This is one of the characteristics that the Portuguese market differs from the overall European market. As we could see from the analysis, the top 4 brands in Portugal gather 64% of market share compared with the 45% of the top 4 brands in the European market, meaning a higher degree of concentration. The other 82 existing brands in Portugal share 36% market share. There are several options regarding brand availability, but the presence of such large multi-national companies, with exceptionally high assets, boosts the degree of rivalry. Fixed cost and exit barriers are of significant meaning within this market and leaving it requires substantial divestment of highly specific assets. These factors enhance the rivalry.

Regarding electric motorcycle, there are fewer competitors. There are three brands specialized in electric motorcycles available in the Portuguese market: Brammo, Zero and Volta, and several others that have electric options: BMW, Peugeot, Govecs, Ventrix, Butalco, KTM, amongst others. The options in the second group are mostly scooters with exception of KTM and Butalco that are trial or dirt-bikes.

FAMEL would have three direct competitors, none Portuguese and all represented by third party online retailers, which makes this an attractive sector.

Supplier Strength (Figure 26, Appendix 5)

Key inputs for a motorcycle manufacturer include aluminum and steel sheet, bar, castings, and forgings, as well as finished components such as fuel injection systems, seats, batteries, and tires. It is more cost-effective to source these items from specialist manufacturers than to produce them in-house. Amongst providers, there are large, multi-nationals with a strong presence within the global markets which boosts their power. Market players often sign contracts with their providers, strengthening their power. The high importance of the raw materials to the manufacturers of motorcycles can enhance supplier power furthermore.

Typical suppliers are also likely to sell to a wide variety of manufacturing components, with the motorcycles market only constituting a minor part of their revenues, which strengthens the suppliers' position. However, with minimal differentiation of raw materials there is little to distinguish between suppliers. Manufacturers also have low switching costs thus lowering supplier power further. Overall, supplier power within this market is moderate.

For FAMEL, the supplier analysis is the same as the European, due to the fact that the components they are hoping to use, are EU made. The difference is that almost every component has to be imported and there are few electric motor suppliers for motorcycles, which could increase supplier power.

Buyer Power (Figure 27, Appendix 5)

Taking motorcycle dealers as buyers, there are several buyers with substantial size so the loss of one could be potentially damaging for manufacturers. The leading brands sell a big portion of their vehicles through franchised dealerships and being customers loyal to this brands, dealers lose power because they need to have big brands products. There is a large number of buyers within motorcycle market and the number is expected to increase following the predicted market growth rate, coupled with high level product differentiation weakens buyer power. As it is unusual to

integrate business backwards into manufactures area, dealers tend to decrease even more their power. Even though, the overall factor is assessed as moderate.

For the electric market in Portugal, there are some dealers that sell electric scooters form different brands, besides the big franchised dealers. There's only one physical store dealer that sells Zero and Brammo motorcycles besides their online store: Zeev. The other dealer only sells online, and deals Volta and Brammo brands. Dealership/buyer power is increased by this conditions, so to avoid loss of negotiation power, FAMEL could elaborate on a different retail strategy like their own online store, agreements with other motorcycles dealers that don't have standard electric types of motorcycles to sell, or even, own flagship stores.

Entry Barriers (Figure 28, Appendix 5)

As the market is expected to grow in terms of value and volume, global top brands competition is not based primarily on the price of the product and this factor usually has a low priority. However, setting up production facilities involves large capital outlay thus constituting a significant entry barrier and high fixed costs. Additionally, leading motorcycle brands such as Honda, Yamaha or Piaggio enjoy an exceptionally high level of brand recognition, which is reflected in their high sales volumes and market dominance. Due to the existing strength of premium motorcycle brands, it is difficult for new entrants to introduce their products into the market. However, sales are sensitive to price and it is possible for manufacturers to enter markets through the sale of budget vehicles, as we could see from the Keeway example.

The global tightening of emission standards is ramping up costs further as motorcycle re-designs are required. Such a trend can trigger the demand for newer, more economical engines, involving higher costs of R&D spending. The EU has one of the strongest emissions guidelines; currently, emissions of NOX, HC, carbon monoxide (CO), regulating particulate matters and vehicles that do not meet the standards are not permitted. Overall, the threat of new entrants with respect to the European motorcycles market is weak.

In Portugal, the same legislation and high setup costs affect new comers, but surpassing this restrictions there is no other big challenge for FAMEL. Besides the know-how necessary and

supplier availability, they already have an exceptionally high level of brand recognition allied with the competitive advantages of being totally green and assuming being cheaper than available options.

Threat of substitutes (Figure 29, Appendix 5)

Substitutes to the motorcycles market consist of other types of vehicles or means of transport. The threat of substitution with respect to the motorcycles market is dependent upon the necessity of motorcycle use to the end-user. In the majority of European countries, motorcycles are seen as a luxury, rather than a car substitute. They are more often used for leisure purposes than for commuting and in times of economic uncertainty demand will fall. In this case, the threat from substitutes is higher, as consumers are more likely to continue using other vehicles or public transport, than purchase a motorcycle which may be viewed as a luxury rather than a necessity. Another alternative threatening motorcycle manufacturers is used motorcycles. These may be sold privately, or by dealers that also offer new motorcycles, and will almost always be cheaper than a new vehicle of similar specification. The threat of substitutions is considered moderate.

In Portugal there's still not a second hand electric motor-cycles market as it is still a novelty product. There are some electric scooters available in this used market. In cities there's still people that use it as primarily way of transport, so FAMEL could leverage on this two factors.

Porter's 5 forces Market attractiveness summary: Europe Portugal									
Competition		Supplier Strength		Buyer Power		Entry Barriers		Substitutes	
Europe	Portugal	Europe	Portugal	Europe	Portugal	Europe	Portugal	Europe	Portugal
Low			Moderate				High		

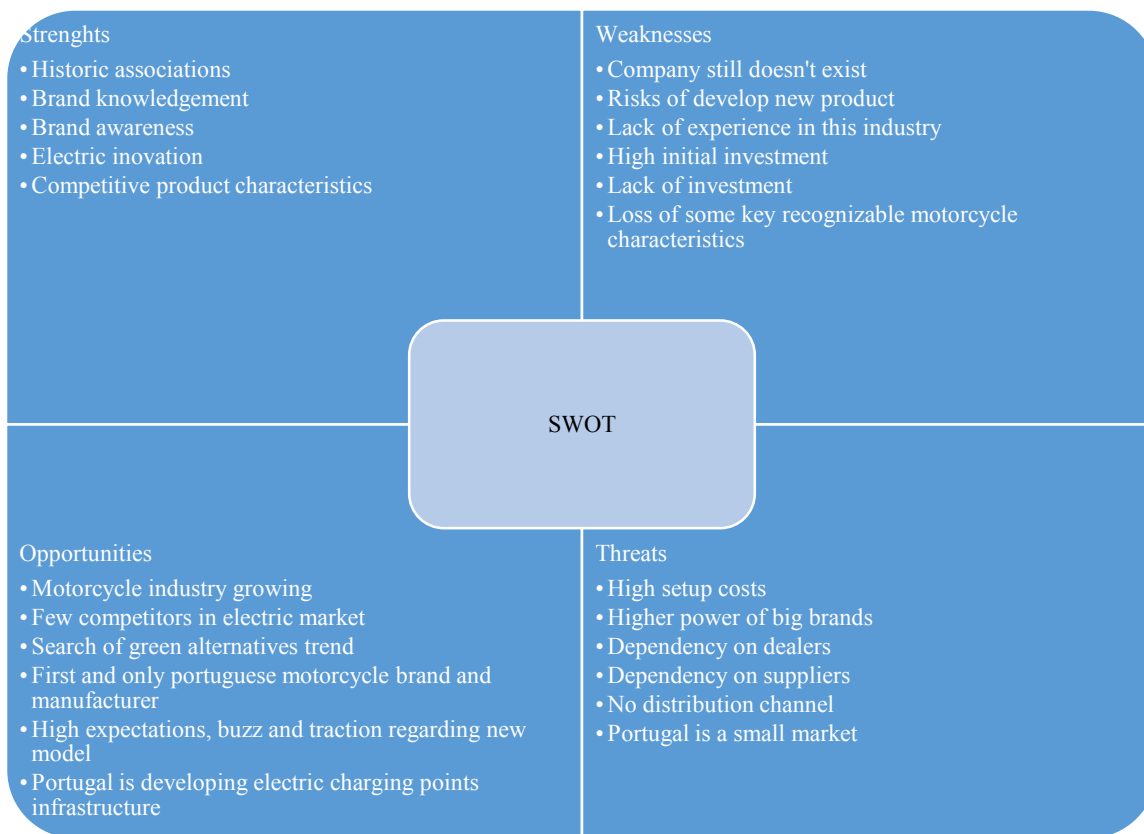
2. Describe the strengths, weaknesses, opportunities and threats of the Famel Company

From the information collected along the case, we can conclude that FAMEL brand was very successful in its golden years (70s, 80s), being its models, top sellers among motorcycles at that

time. They had perceived quality of construction, durability, maintenance and were easily changed for better performances.

Famel Company has a big history and tradition in Portugal. The brand has a stable and nationwide knowledge formed by owners, supporters, fans, collectors and motorbike lovers as seen by the big buzz generated after the revival disclosure. Even people that don't have motorcycles may have heard about this brand. The brand history, recognition, knowledge and perception is a competitive advantage.

The following SWOT Analysis gives an overall idea of the market and company situation:



3. Describe the electric and non-electric motorcycle competitors' products

The top selling motorcycles in Portugal in 2015 were Honda, Yamaha, Keeway and Sym.

For this brands, success can also be explained through their products characteristics. Consumers key attribute associations to this brands were quality mechanics, reliability, efficiency/economic and accessible price.

The most valued attributes by costumers when evaluating motorcycles characteristics were quality mechanics, reliability, maintenance/upkeep, accessible price and efficiency/economy.

This brands clearly position their models and supply to be align with consumer's most valued characteristics, therefore, some of their success is explained.

Through the analysis of the competition (Table 18, Appendix 5) we can conclude that there are some product classes in the Portuguese electric motorcycle market. This product classes were made regarding product characteristics, in this specific case, power, range and price.

There are three well defined electric motorcycle classes plus one. For the interest of this analysis, only the class were Famel new model is competing will be scrutinized.

There are six standard type of chassis motorcycles plus two scooters representatives that relate in terms of Power. The concentration of products in this class originates from legislation restrictions, were power limited to 11kW is key factor that explains characteristics of the supply. All models are 125cc-equivalents, limited to 11kW motor powers. As power is the same for products in this cluster, price is a key differentiator between models. The cheapest model is priced at 8.100€ and the expensier at 14.226€.

There are the same six plus one (scooter) motorcycles that relate in terms of range, which show already some brand objectives regarding their target specificities. Motorcycles ranges variate between 50km and 200km, but the average ranges of most models are around 70km. Technology restrictions and target consumer necessities explain this ranges.

For FAMEL, with power restrictions, an advantage could be originated through lower prices practice and average ranges. Given the actual projected characteristics of the new XF-17 model

(7500€, 100km range), there are some core competences regarding price – cheapest model – and range – above average.

4. Define Famel's target and positioning

FAMEL should use a single segment targeting strategy. Focus on the segment explained above, will enable product specialization and focus marketing efforts just for customers within this segment. Risk would also be reduced at a first approach to the market, due to the lower financial and company power FAMEL have.

Famel should promote their strategy, focus their marketing efforts and design their product regarding the following target characteristics:

Demographic:

- Daily average kilometers between 10 – 60 km
- Male
- Age between 25 and 34 years old
- Annual income below 30.000€
- Live in the city

Psychographic

- Hot rodders/Urban Riders
- Have a medium motorcycle usage or just use it in some situations
- Value quality mechanics, maintenance/upkeep, reliability and accessible price

Positioning

The most valued attributes by costumers when evaluating motorcycles characteristics were quality mechanics, reliability, maintenance/upkeep, accessible price and efficiency/economy.

Brand associations regarding Famel were historic, classic and quality mechanics. There was no associations to modernity, environmental friendliness and customization.

Brand awareness and knowledge and key associations are crucial for brand appeal. Famel was rated highly in each of this aspects, revealing already tremendous potential regarding consumer's acceptance. If Famel is able to maintain some of the key associations perceived by consumers and improve some of the lower rated ones, there is clearly a competitive advantage towards electric competitors that are rated very low in each of this brand associations.

When exposed to new XF-17 prototype aspect and expected future characteristics, consumer's perception about modernity, efficiency/economic and environmental friendly were rated the highest.

If Famel is able to ally this characteristics, with the already well perceived historic associations of quality mechanics, and ultimately charge a lower price to consumers, there's a real possibility of success.

With brand perceptions improved in the environmental friendliness and modernity, Famel is also having high ratings perception for three of the five most important attributes for consumers and, if efforts focus in improving reliability and maintenance/upkeep of the product, they will have a winning product.

Note: There was a difference in the expected price for the new model after knowing it was Portuguese, but it was not statistically relevant and one can't conclude about the value perceived when a brand is Portuguese. The conclusion that might be outdrawn is that knowing this motorcycle brand is Portuguese, doesn't change consumer perception about product value.

5. Use Keller's CBBE definition to analyze Famel's brand equity

To answer this questions it is needed to be familiar to Keller's Costumer-Based Brand Equity dimensions.

Saliency analysis: relates to aspect of customers awareness of the brand in terms of two dimensions – depth and breadth. Depth of brand awareness refers to how easily customers recall or recognize the brand. Breadth refers to the range of purchase and consumption situations in which the brand comes to mind:

- Famel was the most recognized brand with 95% brand recognition and from this sample, 86% had some kind of information about the company or models.
- 96% of the 130 respondents that were most interested in acquiring the new model, had heard about FAMEL. From those 125 that heard about FAMEL, 117 have some kind of information about it.

Brand meaning analysis: can broadly be distinguished in terms of functional, performance related considerations versus abstract, imagery-related considerations. They can be formed by customers own experiences and contact with the brand or indirectly through other source of information:

- Famel (TR – 115) was best described with historic (54%), classic (45%) and quality mechanics (37%). It was least described as modern (0%), environmental friendly (0%) and customizable (1%).

Brand responses analysis: relates on how customers respond to brand through several sources of information, what think or feel about brand. Can be distinguished according brand judgments and brands feeling. Brand judgments involve how customers put together all different performance and imagery associations to form their opinion. Brand feelings are emotional responses and reactions with respect to the brand. In this case it was taken into consideration the perceptions of respondents concerning the new XF-17 model and its intended characteristics:

- Without knowing attributes the average opinion was 4.82 (1 – extremely negative evaluation; 7 – extremely positive evaluation)
- After knowing attributes the average opinion was 4.84
- For the 130 respondents that answer the question about the possibility of purchasing the new model with value 10, without knowing attributes, the average opinion was 5.80
- For the 130 respondents that answer the question about the possibility of purchasing the new model with value 10, knowing attributes, the average opinion was 5.81

Brand relationships or brand resonance analysis: refers to the nature of the relationship that customer has with the brand. Is characterized in terms of intensity or depth of psychological bond as well the level of activity engendered by this loyalty. Here, new models intentions os purchase and recommendation are good indicators for brand final resonance:

- 56% of the respondents would considered the purchase of this model, among the available options, of which 19% would considered it for sure.
- 57% would probably recommend it of which 25% of the respondents would recommend it for sure

From the 130 respondents that would definitely consider the purchase of the motorcycle, 90% would recommend it to a known person that would initiate a motorcycle purchase process.

Appendix 5: Tables, figures and other sources



Figure 17 - Suzuki T125 Stinger. Source: bike-urious.com

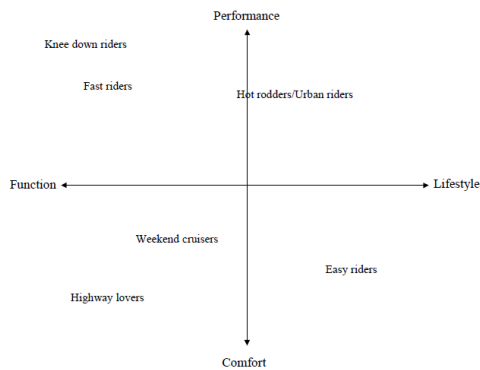


Figure 18 - Types of consumers. Source: Ducati Case Study 2002, Giovanni Gavetti

Category	2014	%
Motor-cycles	1.0	73.1%
Mopeds	0.4	26.9%
Total	1.4	100%

SOURCE: MARKETLINE

MARKETLINE

Table 14 - Europe motorcycles market category segmentation: million units and % share by volume, 2014. Source: Marketline

Geography	2014	%
Germany	2.1	19.9
France	1.8	17.1
Italy	1.4	13.3
Spain	1.3	12.1
United Kingdom	0.9	8.2
Rest of Europe	3.1	29.5
Total	10.6	100.1%

SOURCE: MARKETLINE

MARKETLINE

Table 15 - Europe motorcycles market geography segmentation: \$ billion and % share by value, 2014. Source: Marketline

Company	% Share
Piaggio	14.2%
Yamaha	13.6%
Honda	11.9%
BMW	5.3%
Other	55.0%
Total	100%

SOURCE: MARKETLINE

MARKETLINE

Table 16 - Europe motorcycles market share: % share, by volume, 2014. Source: Marketline

SCOOTERS 125cc-equiv.	2015	2014	Variation
BMW C-evolution	409	227	80%
Eccity Artelec	28	18	56%
GOVECS	5	27	-81%
Sanyou	3	1	200%
Erider	1	1	0%
Jianuo JN6000D	1	1	0%
Jonway YY125T	1	0	
Scutum	1	0	
Other	0	21	
Total	449	296	52%

SCOOTERS 50cc-equiv.			
GOVECS	161	20	705%
Other	?	?	

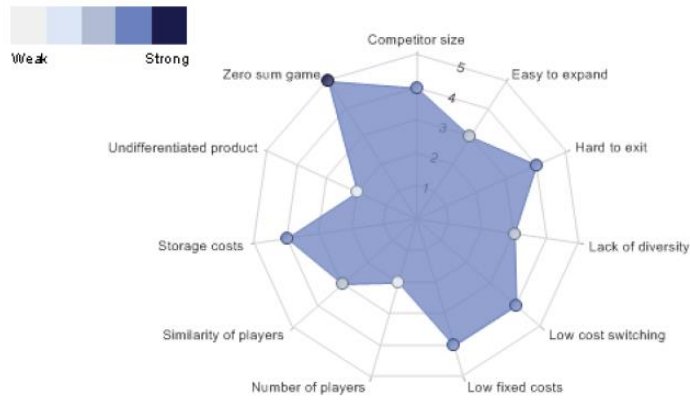
Table 17 - French electric 50cc and 125cc-equivalent electric scooter sales: volume, 2014-15. Source: CSIAM

Brand	Power - kW	Price	Range - Km/Combined
Brammo - Empulse	40	11 970,00 €	129
Brammo - Empulse R	40	14 990,00 €	129
Brammo - Enertia Plus	13	11 070,00 €	93
Butalco - Brinco	2	4 800,00 €	100
Famel - XF -17	11	7 500,00 €	100
Famel - XF -17	40	7 500,00 €	100
Govecs Go! S3.4	6	7 370,00 €	50
Vectrix Premium NimH	11	8 490,00 €	75
Volta - BCN City	11	8 100,00 €	70
Volta - BCN Sport	11	9 500,00 €	70
Zero - FX FZ3.3	20	11 025,00 €	50
Zero - FX FZ6.5	33	13 465,00 €	100
Zero - FXS FZ3.3	11	11 025,00 €	55
Zero - FXS FZ6.5	11	13 465,00 €	109
Zero - S	11	14 226,00 €	196

Table 18 - Portuguese market Electric motorcycles available. Sources: Famel; zeromotorcycles.com; zeev.pt; govecs.es; zevtech.pt; butalcobrinco.com; voltamotorbike.com; brammo.com

Brand	Power - kW	Price	Range - Km/Combined
Harley-Davidson - Livewire	55	50 000,00 €	85
Energica - Ego	100	30 750,00 €	145

Table 19 - High-end Electric motorcycles market. Source: Famel; zevtech.pt



SOURCE: MARKETLINE

MARKETLINE

Figure 19 - Drivers of degree of rivalry in the motorcycles market in Europe, 2014. Source: Marketline



SOURCE: MARKETLINE

MARKETLINE

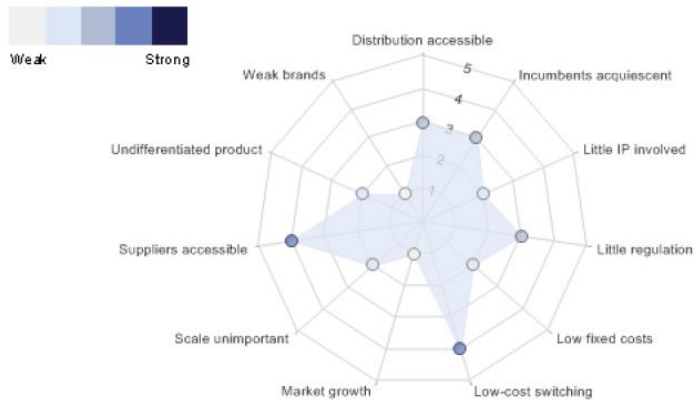
Figure 20 - Drivers of supplier power in the motorcycles market in Europe, 2014. Source: Marketline



SOURCE: MARKETLINE

MARKETLINE

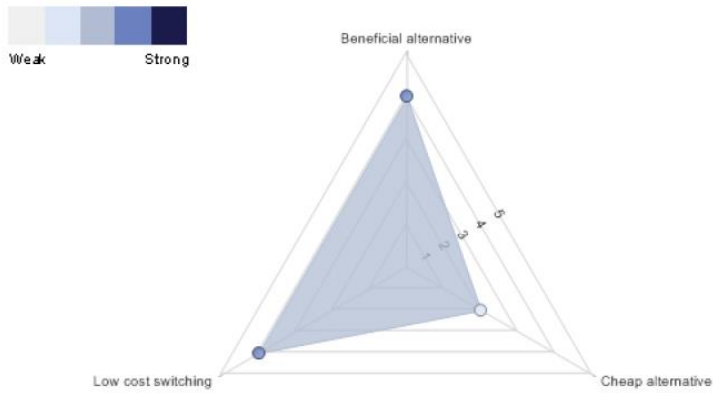
Figure 21 - Drivers of buyer power in the motorcycles market in Europe, 2014. Source: Marketline



SOURCE: MARKETLINE

MARKETLINE

Figure 22 - Factors influencing the likelihood of new entrants in the motorcycles market in Europe, 2014. Source: Marketline



SOURCE: MARKETLINE

MARKETLINE

Figure 23 - Factors influencing the threat of substitutes in the motorcycles market in Europe, 2014. Source: Marketline

Appendix 6 - Glossary

CAGR - Compound annual growth rate (CAGR) is a business and investing specific term for the geometric progression ratio that provides a constant rate of return over the time period.

Max power Peak - power the motor can produce for a finite period of time. Actual power output may vary depending on a number of conditions, including operating temperature and state of charge.

Continuous power - maximum thirty minutes power at the output shaft of an electric engine.

Battery electric vehicle (BEV) is a type of **electric vehicle (EV)** that uses chemical energy stored in rechargeable battery packs. BEVs use electric motors and motor controllers instead of internal combustion engines (ICEs) for propulsion. They derive all power from battery packs and thus have no internal combustion engine, fuel cell, or fuel tank.

Electric motor is an electrical machine that converts electrical energy into mechanical energy.