UNIVERSIDADE CATÓLICA PORTUGUESA

The influence of Digital Marketing on the choice of a Fuel Brand

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The influence of Digital Marketing on the choice of a Fuel Brand

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por

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Finally, I thank all the people who lost a little of their time to answer my questionnaire, since their participation was most essential for the development and completion of this research.

Resumo

Com o desenvolvimento das plataformas digitais, as estratégias de marketing digital têm vindo a adquirir uma importância significativa em qualquer que seja a empresa, sendo vistas como uma forma de segmentar um público-alvo, e consequentemente, otimizar o seu desempenho no método de abordagem a cada. Esta pesquisa, visa examinar a influência do marketing digital na escolha da marca de combustível. Com uma demonstração de dados de um questionário, desenvolvido para rever os hábitos de comunicação social de um indivíduo e as variáveis mais importantes na escolha de uma marca de combustível, esta investigação foi realizada utilizando diversos métodos de análise. De forma a medir as diferenças a nível demográfico e comparar os resultados de um inquirido para medir os hábitos dos meios de comunicação social, foi feita uma análise de Pivot Table. Após isso, foi construída uma matriz para medir a correlação entre o marketing digital e as suas variáveis preditoras, seguido por uma segmentação para diferenciar os tipos de clientes e otimizar a abordagem de uma marca de combustível em relação a cada um deles através de uma análise de segmentação, terminando com uma regressão logística que visou verificar se existia alguma variável subjacente que afetasse diretamente a influência do marketing digital ao escolher uma marca de combustível. De acordo com os resultados do estudo, o investimento de uma marca de combustível em plataformas sociais sofre de falta de publicidade e exposição dos benefícios da sua utilização regular, significando que, os esforços digitais de uma marca de combustível, se otimizados, podem efetivamente adquirir-lhes uma vantagem competitiva.

Palavras-chave: marketing digital, redes sociais, plataformas sociais, petróleo e gás, marca de combustível

Número de palavras: 8670

Abstract

With the advent of social platforms, digital marketing strategies have been gaining a lot of importance among companies, in order to segment and approach their target audiences and consequently improve their performance. This study aims to examine the influence of digital marketing when choosing a Fuel Brand. It presents data from a questionnaire developed for reviewing an individual's social media habits and the most important variables in Fuel Brand choice. The research was performed utilizing various methods of analysis. To see the differences on a demographic level and compare the respondent's results to measure social media habits, a pivot table analysis was made. A correlation matrix was built to measure the correlation between digital marketing and it's predictor variables, clustering was made to differentiate the types of customers and optimize a brand's approach towards each, and a logistic regression was made to verify if there was any underlying variable that affected the influence of digital marketing when choosing a Fuel Brand. According to the study's results, a Fuel Brand's investment in social platforms suffers from a lack of advertising and exposure towards the benefits of actually utilizing these, meaning that if well leveraged, a Fuel Brand's digital efforts can effectively gain them a competitive advantage.

Keywords: digital marketing, social media, social platforms, oil and gas, gas station brand, fuel brand

Number of words: 8670

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Introduction

The use of fossil fuels has a long history dating back thousands of years. However, it´s not accurate to say that the fuel industry is an old one since it goes through change year after year, and companies must keep constantly improving and adapting to stay competitive, especially in oil and gas, since it remains a vital part of the global economy and energy mix (Craig, J et al., 2018).

According to Schiavi et al. (2015), the petroleum sector, which is one of the world's largest and most diverse markets, is undergoing significant transformation. With the advancement of online social networks over the last two decades, the internet has evolved from a simple communication tool into a unique revolutionary technology, enabling consumers and businesses to connect. (Kotler & Armstrong, 2017). The digitization of the economy is altering the nature of competition, affecting the fundamental way firms compete in digital markets (Cennamo, C, 2021). Osatuyi (2013) also stated that the use of social media to share information is gradually replacing traditional media outlets such as television, newspaper, and radio. Research made by Whiting, A., & Williams, D. (2013), shows that there is an existence of ten uses and gratifications for using social media and the ones that mainly contribute to its efficiency and effectiveness of it are its convenience and its seeking and sharing components.

With the competitiveness of the oil and gas industry increasing, the usefulness of digital marketing grows, since it is known to help businesses stand out in a crowded market by efficiently promoting their products and services through different, more modern channels. Whereas it allows companies to increase brand awareness and reach a larger audience, digital marketing and social media can help the oil and gas industry stay up to date on industry trends and emerging technologies, while working as a crisis management tool concurrently (Yusuf, Y. Y et al., 2014). Social Media and Digital Marketing Platforms can help Fuel Brands benefit from campaigns to generate leads and increase new customer engagement, enabling simultaneous interaction with said customers in real time with responses to their questions and concerns. (Capello, M et al., 2022)

This dissertation aims to uncover the main factors that influence the individual when choosing a Fuel Brand, particularly the influence that digital marketing and social media platforms could have.

Through a process of gathering data from a sample of Portuguese individuals, the main goal is to segment the sample respondents into clusters, measure the amount of influence digital marketing and social platforms have, to support the decision-makers in defining a strategy for each specific segment that optimizes a brand’s digital performance.

This research is organized into four main chapters, with the first one being the literature review, the second consisting of the methodology of the assignment, the third being the presentation and discussion of the results and the fourth and final consisting of the conclusions of the assignment.

Chapter 1
Literature Review

1.1. Digital Marketing

Yannopoulos (2011) stated that the Internet is the most powerful tool for businesses. Parsons et al. (1996), stated that for a business to be successful it would have to merge online with traditional methods for meeting the needs of customers more precisely.

Chaffey et al. (2009) described Internet marketing as achieving marketing objectives by applying digital technologies. It has been confirmed that online advertising is a powerful marketing vehicle for building brands and increasing traffic for companies to achieve success (Song, 2001). Expectations in terms of producing results and measuring success for advertisement money spent digital marketing is more cost-efficient for measuring return on investment in advertisement (Pepelnjak et al., 2008). Connecting people is one of the most effective and significant business developments of the twenty-first century (Alsubagh, 2015). Digital Marketing is defined as the sale and purchase of information, products, and services through a computer or internet network (Rao & Ratnamadhuri.,2018).

The pace of change has accelerated as more marketing academics and practitioners focus on digital technologies. Selling distinctive products and services has given way to marketing campaigns that are launched across digital platforms and now make use of digital resources. Digital marketing is projected to remain at the forefront of the technological transition in the future (Lamberton and Stephen, 2016; Martín-Consuegra et al., 2018). Millions of people's daily lives have been transformed by digital marketing through social and mobile media, which has expanded into popular social media practices and often leads to the formation of customer relationships (Faruk, M. et al., 2021).

1.2. Social Media

Online social networks have become an important element of people's communication and interaction lives, and they have a wide range of effects on people's behaviour and communication (Cheung & Lee, 2010). Social media has undoubtedly been a breakthrough that has not only changed the way people interacted with each other but also the way brands market. (Forbes, 2023).

Yates and Paquette (2011) formerly described social media as tools that enable an open online exchange of information through conversation and interaction. Boyd and Ellison (2007), named it a web service that allows people to construct a profile either public or semi-public within a bounded system. In 2022, social media networking evolved into being one of the most popular digital activities, with over 4.26 billion users worldwide with a projected increase to 6 billion users, by 2027 (Statista, 2023). Social media, or online social networks, is now a sharing system that relies on user-generated content. It is associated with participation and interaction between internet users and the web, which differs from traditional media platforms (Cooke & Buckley, 2008)

A firm can target any market in any geography by assigning locations on digital marketing tools. A firm owner can target any audience in terms of age or gender using analytical features offered by social media, especially Facebook (Arora et al., 2019). With the development of science and technology, social media have come to exert a great impact on commercial value (Adkins & Lury, 2011). As mentioned before, due to its massive numbers of users, issues spread fast via social media (Lawrence et al., 2010), which automatically increases the noteworthiness of the macro-environment. Different types of social media such as Facebook, Twitter, and blogs have been adopted for marketing functions around business-to-customer brand management and product advertising as well as business-to-business relationship management (Howells, 2011), and through this method, companies were able to increase their customer loyalty and actual sales (De Vries and Carlson, 2014).

According to Zhu et al., (2004, 2006), the choice of adopting social media for business is notoriously influenced by the technology-organization-environment (TOE) framework for organizational technology adoption. As per the framework, three key components may have an impact on how social media is adopted and used throughout organizations for specific tasks. These elements are organizational factors (internal readiness and strategic goals), environmental factors (organizational pressure), and technological factors (perceived benefits and perceived risk). Following that, Cao, Y. et al., (2018), present a model that defines both antecedent and outcome measures for organizations that adopt social media, suggesting that environmental and technical pressure, organizations' internal readiness, and expected benefits influence the extent of organization-wise social media use.

1.3. Digital Marketing Strategies

Studies show that digital marketing considerably increases a company's success by providing customers with unique experiences (Yasmin et al., 2015). Digital marketing strategies can be used to reach the targeted audience and are shaped to impact the decision-making process of customers (Poulis et al., 2019).

One of the most regarded digital marketing strategies, used to send orders or targeted messages to the same people at the right moment, is E-mail marketing, where companies can meet their customer's specific needs (Ugonna et al., 2017), and where consumers also connect their needs upstream to the businesses via E-mail (Reimers et al., 2016). In extension, E-mail marketing is a type of direct marketing that uses email to message or communicate promoting funds to connect audiences (Lodhi, & Shoaib, 2017). It´s a used method for companies, when an individual holds a discount on the platform for a certain period, as a way to alert the customer.

Up next is a strategy known as Mobile marketing, a set of techniques that enables businesses to interact and communicate with their audiences in a relevant and interactive way via any device or mobile network (Mohamed et al., 2016). As of today, Mobile marketing is the largest, quickest, cheapest, and most effective marketing channel where people can simply learn about the attributes of appealing goods and complete the buying and selling process without having to travel to the location of the goods (Alam et al., 2015), and consequently offers customers access to information about their needs and perks, which might affect how they choose to spend their money (Tiffany et al., 2018). Mobile marketing, being a communication platform on a device, has at its core the two other communication methods that involve Digital marketing as a whole.

The first channel is Online advertising, a technique for branding that informs the audience and persuades consumers to make purchases, with the usage of website traffic, the internet exhibits the fondest products to each consumer (Budiman, 2021). Online advertising can make use of the opportunity to reach customers through a variety of online platforms, raise awareness of their products, and boost future sales (Dhore & Godbole, 2019). The promotion of goods without regard to location is the main benefit of Online advertising (Khan & Islam, 2017), making it easy for firms to update their products, services, and information current time (Lim et al., 2011). The main tools to improve even further this type of marketing come from Search Engine Optimization (SEO) which entails refining your website and its content so that it appears high in search engine results pages for specified keywords and Pay-per-click (PPC) advertising which involves placing ads on search engine results pages or other websites and paying a fee each time someone clicks on your ad (Bhandari & Bansal, 2018). However, this type of marketing always encounters adversities such as customer loyalty due to the diversification of goods and services and the increasing consumer demands (Aqsa & Kartini, 2015), which can be countered through Content Marketing, which consists of developing and publishing valuable, relevant, and consistent content to attract and maintain a certain audience.

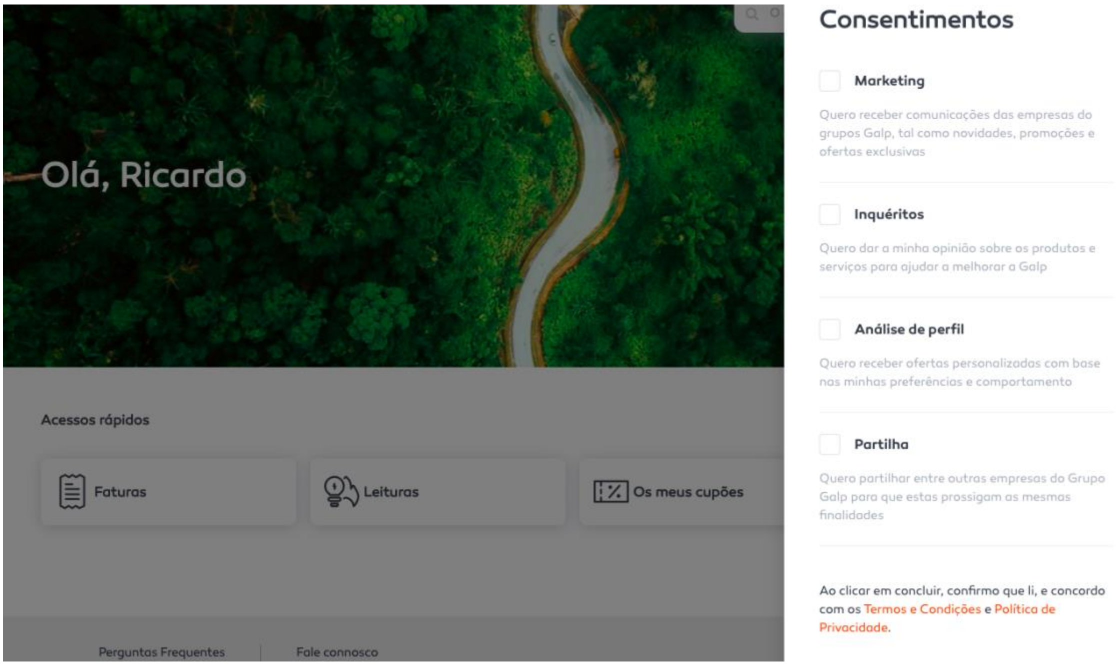
To conclude the variety of digital marketing channels is social media marketing, the newest and fastest growing channel to reach targeted consumers, due to its largest number of users. The simplest definition of social media marketing is promoting a company and its products through social media networks (Bansal et al., 2014). Social media platforms currently provide a forum for marketers to communicate with consumers. Additionally, brands are now drawing customers via social media (Budiman, 2021). This sort of marketing can be described as a subset of online marketing initiatives that support established Web-based advertising and promotion techniques, such as email newsletters (Omar & Atteya, 2020).

Social media also investigated websites and programs made to let users share content quickly, effectively, and in the present. As a result, new channels are being created and improved for firms with this new outreach and marketing strategy. As a result of the official social networking website platform's introduction of analytics tools, social media marketers are now gaining better and more impactful insights (NUR DP E, 2021), and as such a subsection of Social media Marketing is currently being introduced in major companies, called Influencer Marketing, which implies collaborating with individuals who have a large following on social media or other platforms to promote your business, such as creating and sharing product demonstrations, tutorials, or company culture videos, which function in part as online advertising but primarily as a way to reach a new generation.

1.4. The social platforms of Fuel Brands in Portugal

According to research by NUR DP, E. (2021), for oil and gas firms, social media can be used as a marketing tool, and based on the performed analysis, utilized platforms employ advantages for oil and gas firms to give a signal of business prospect, make use of opportunities related to industry alliances, recruit employees globally, and do learnings education of oil and gas industry. A study from the Sales Index of Marktest (2021), in May 2021, Portugal had 2616 gas stations, with 25% being from Galp, 19% from Repsol, 18% from British Petroleum (BP), 10% from Cepsa, 9% from Prio and 19% being an aggregate of other low-cost brands, represented as a whole for research purposes, and throughout it, addressed as “Low-cost brands”.

Galp, the leader of the market in question, holds an online platform and digital application (“app”) called “Mundo Galp”. This is an “app” that right off the login screen, gives the option to the customer if he wants to be warned of new marketing campaigns, promotions or offers via e-mail, or surveys to improve the brand's products and campaigns by giving its individual opinion, profile analysis to receive personalized offers based on customer preference and behaviour (Figure 1).



Consentimentos

☐ **Marketing**

Quero receber comunicações das empresas do grupos Galp, tal como novidades, promoções e ofertas exclusivas

☐ **Inquéritos**

Quero dar a minha opinião sobre os produtos e serviços para ajudar a melhorar a Galp

☐ **Análise de perfil**

Quero receber ofertas personalizadas com base nas minhas preferências e comportamento

☐ **Partilha**

Quero partilhar entre outras empresas do Grupo Galp para que estas prossigam as mesmas finalidades

Ao clicar em concluir, confirmo que li, e concordo com os Termos e Condições e Política de Privacidade.

Figure 1 - Login screen of Mundo Galp

The app is very similar to the website, functioning as the general digital app for the brand, with an easy-access homepage, and an option to check if an individual has any coupons or discounts, any receipts, any ongoing energy contract with Galp (Figure 2), an easy way to order gas canister, and has easy access for an individual to create a Galp+ Card, which gives an automatic discount in oil and petrol when one attends a Galp gas station.

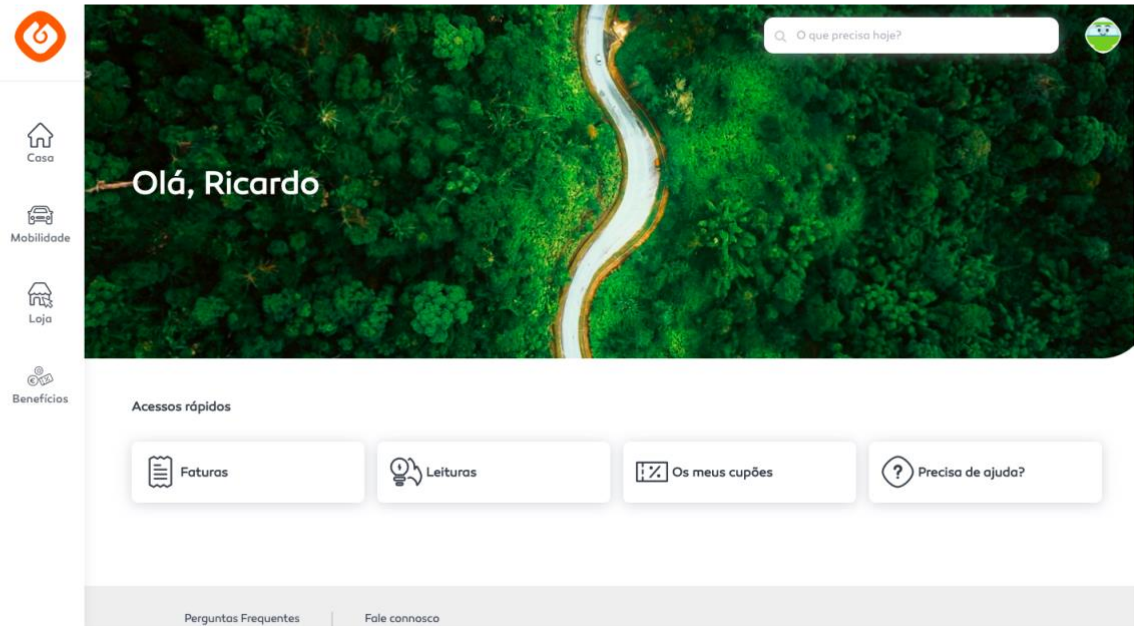
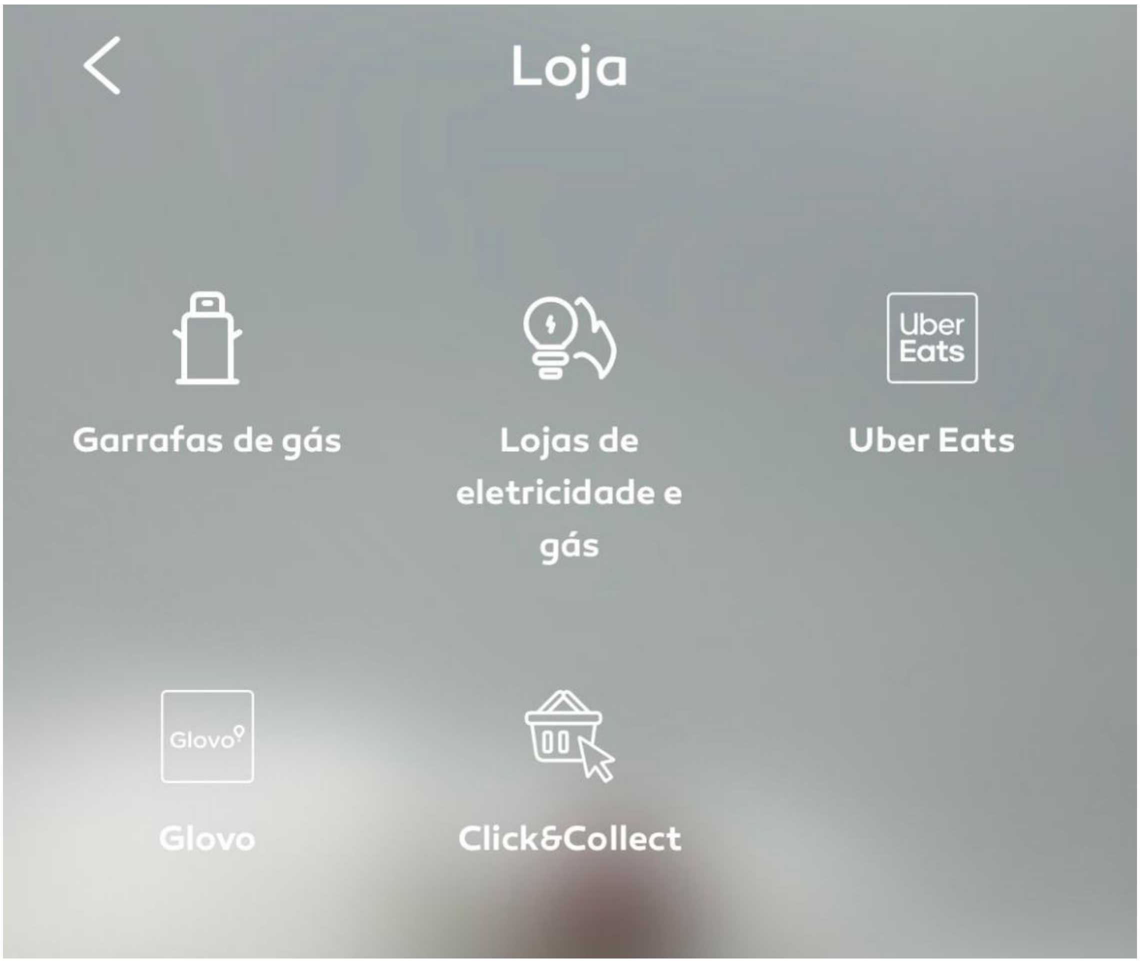

O que precisa hoje?
Casa
Mobilidade
Loja
Benefícios
Olá, Ricardo
Acessos rápidos
Faturas
Leituras
Os meus cupões
Precisa de ajuda?
Perguntas Frequentes
Fale connosco

Figure 2 - Front page of Mundo Galp's website

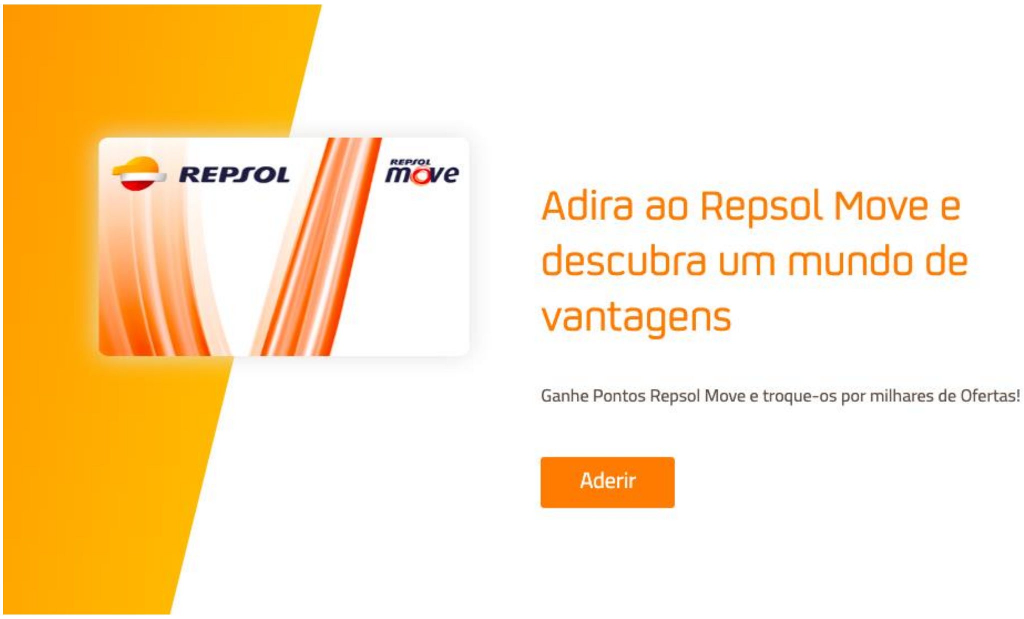
The digital platform also serves as the direct platform for online campaigns, an example being that Galp had a Christmas campaign with a different promotion every day, whether in gas or oil discount coupons, or a variety of discounts in several products, for every day one logged into their account, whether via the website or the digital app. The mobile application even has an easy-access direct widget which connects the customer to UberEATS and Glovo (Figure 3) if they want to order a certain product from a gas station.



Loja
Garrafas de gás
Lojas de eletricidade e gás
Uber Eats
Uber Eats
Glovo
Glovo
Click&Collect

Figure 3 - UberEats and Glovo easy-acess

Repsol, which holds the 2nd most gas stations in the country and holds both a platform and digital app called “Repsol Move”, and unlike “MundoGalp” which serves as a general application for the brand, Repsol Move is a digital marketing specialized application for the brand of Repsol. To use this service, one must hold a Repsol Move card, whether in physical or online format (Figure 4), which involves registering all your personal government information, something that can be considered as a displease.

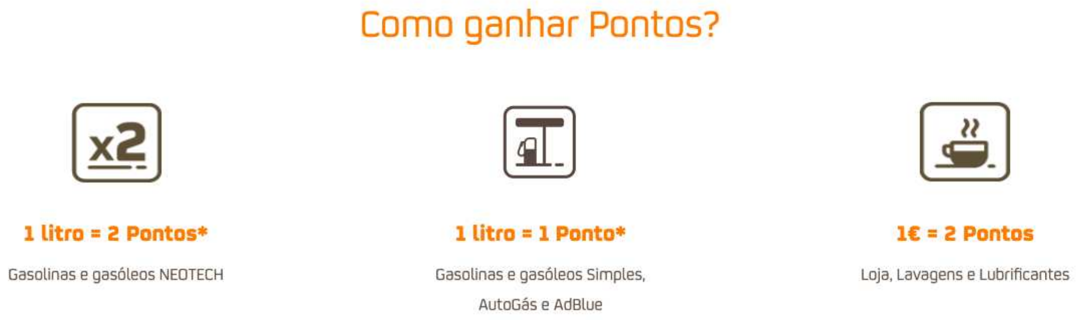


Adira ao Repsol Move e descubra um mundo de vantagens

Ganhe Pontos Repsol Move e troque-os por milhares de Ofertas!

Figure 4 - Repsol Move online card

Similar to "MundoGalp", but before registering the account, "Repsol Move" advises and asks for consent from the individual to create personalized offers based on customer preference and behaviour, and to text or e-mail marketing about the new campaigns that might interest the customer. Upon being registered in the platform, the customer has a simple, structured, and aesthetic page solely to instruct him on how the point system works of the application work. When a customer is associated with a card, he can gain points by a litre of oil or gasoline he acquires, by every propane and butane gas canister, by every euro he spends in a store and by every euro he spends in Repsol's adjudicated carwashes (Figure 5).


Como ganhar Pontos?

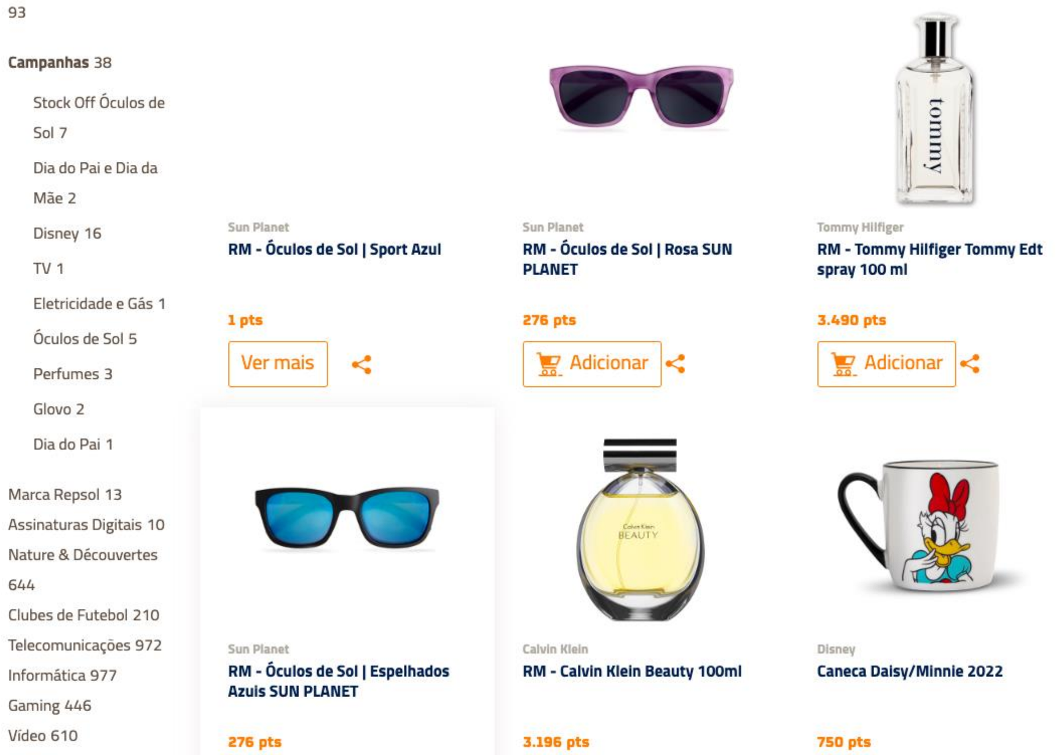
1 litro = 2 Pontos*
Gasolinas e gasóleos NEOTECH

1 litro = 1 Ponto*
Gasolinas e gasóleos Simples, AutoGás e AdBlue

1€ = 2 Pontos
Loja, Lavagens e Lubrificantes

Figure 5 - Repsol Move online Card functionalities

“Repsol Move” then has available several discounts to accumulate more points, gives access to exclusive campaigns, and has in the same platform an online store for a customer to spend their points on thousands of different products, like sunglasses, perfumes, mugs, books or even flight discounts in a variety of Repsol´s partner stores that are available for choice on the website or the application (Figure 6).


93
Campanhas 38
Stock Off Óculos de Sol 7
Dia do Pai e Dia da Mãe 2
Disney 16
TV 1
Eletricidade e Gás 1
Óculos de Sol 5
Perfumes 3
Glovo 2
Dia do Pai 1
Marca Repsol 13
Assinaturas Digitais 10
Nature & Découvertes 644
Clubes de Futebol 210
Telecomunicações 972
Informática 977
Gaming 446
Vídeo 610
Ver mais
Adicionar
Adicionar

Sun Planet
RM - Óculos de Sol | Sport Azul
1 pts

Sun Planet
RM - Óculos de Sol | Rosa SUN PLANET
276 pts

Tommy Hilfiger
RM - Tommy Hilfiger Tommy Edt spray 100 ml
3.490 pts

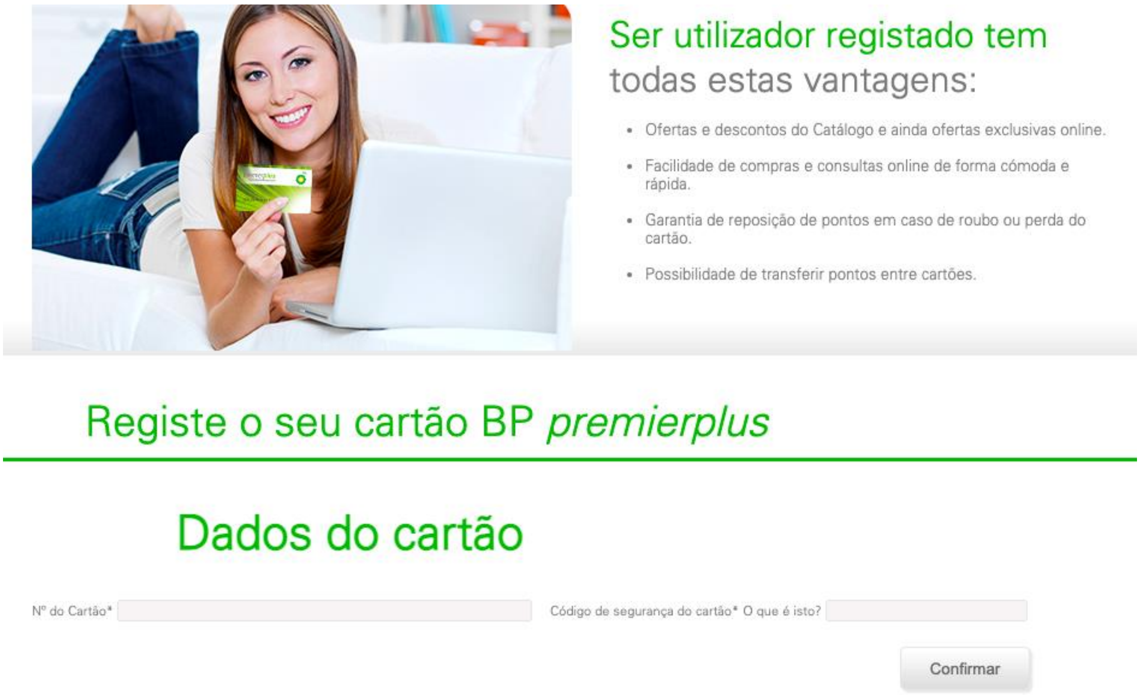
Sun Planet
RM - Óculos de Sol | Espelhados Azuis SUN PLANET
276 pts

Calvin Klein
RM - Calvin Klein Beauty 100ml
3.196 pts

Disney
Caneca Daisy/Minnie 2022
750 pts

Figure 6 - Repsol Move’s Card benefits

Up next is BP, holding 3rd place in the ranking of most gas stations in Portugal, with a platform and digital app called "BP Premier Plus". While in "Repsol Move" one can have a physical card or create a digital one to be registered in the platform, in "BP Premier Plus" only the physical option is available, meaning that the customer needs to first go to a BP gas station and order a physical card (Figure 7), which can be a disadvantage of some sort, due to the inability of login into the app, and have a better understanding of the loyalty system provided.



Ser utilizador registado tem todas estas vantagens:

- Ofertas e descontos do Catálogo e ainda ofertas exclusivas online.
- Facilidade de compras e consultas online de forma cómoda e rápida.
- Garantia de reposição de pontos em caso de roubo ou perda do cartão.
- Possibilidade de transferir pontos entre cartões.

Registe o seu cartão BP *premierplus*

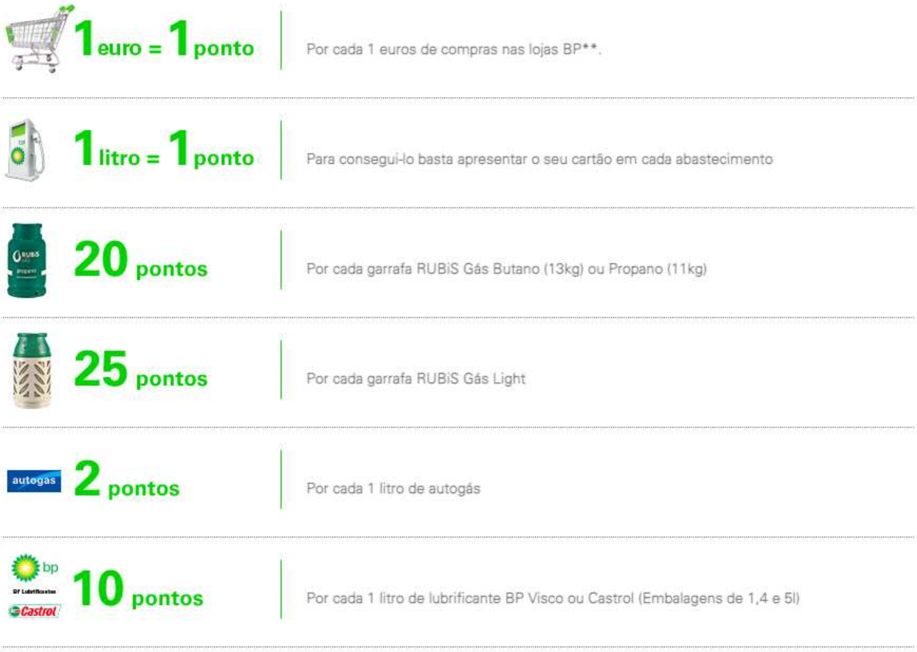
Dados do cartão

Nº do Cartão*

Código de segurança do cartão* O que é isto?

Figure 7 - Inability to Log-In in BP Premir Plus without physical card.

Identical to "RepsolMove", "BP Premier Plus" functions according to a point system, physical or digital, which can be acquired by purchasing gasoline, gas butane or propane RUBIS, lubricants BP/Castrol from participating BP distribution centres, or even through other point-based promotions carried out at BP-affiliated distribution centres and/or by partner companies. The number of points earned may vary depending on where you buy the goods or services from and how much you spend (Figure 8).



1 euro = 1 ponto	Por cada 1 euros de compras nas lojas BP**.
1 litro = 1 ponto	Para consegui-lo basta apresentar o seu cartão em cada abastecimento
20 pontos	Por cada garrafa RUBiS Gás Butano (13kg) ou Propano (11kg)
25 pontos	Por cada garrafa RUBiS Gás Light
2 pontos	Por cada 1 litro de autogás
10 pontos	Por cada 1 litro de lubrificante BP Visco ou Castrol (Embalagens de 1,4 e 5l)

Figure 8 - BP Premier Plus point generating system.

In 4th place is Cepsa, which holds no specific digital platform in Portugal, and only has the official general website and the general official app. Equivalent to "Repsol Move", to be registered in the platform, the customer needs to input his tax identification number and gets approached to receive e-mail commercial communication of the products, services, advantages, and new promotions of Cepsa. Unlike the previous digital platforms, whose focus stood on the products, campaigns, coupons, and promotions of the brand, due to Cepsa only having the standard website and application mentioned previously, 80% of the content presented is the display of the brand's products, only having a small subsection presenting its promotions and campaigns, being less in terms of digital marketing (Figure 9).

CEPSA
PARTICULAR
ENERGIA E AQUECIMENTO
VEÍCULO
NA ESTRADA
O SEU DIA A DIA
PROMOÇÕES
SUSTENTABILIDADE
SAIBA MAIS
CEPSA BUTANO

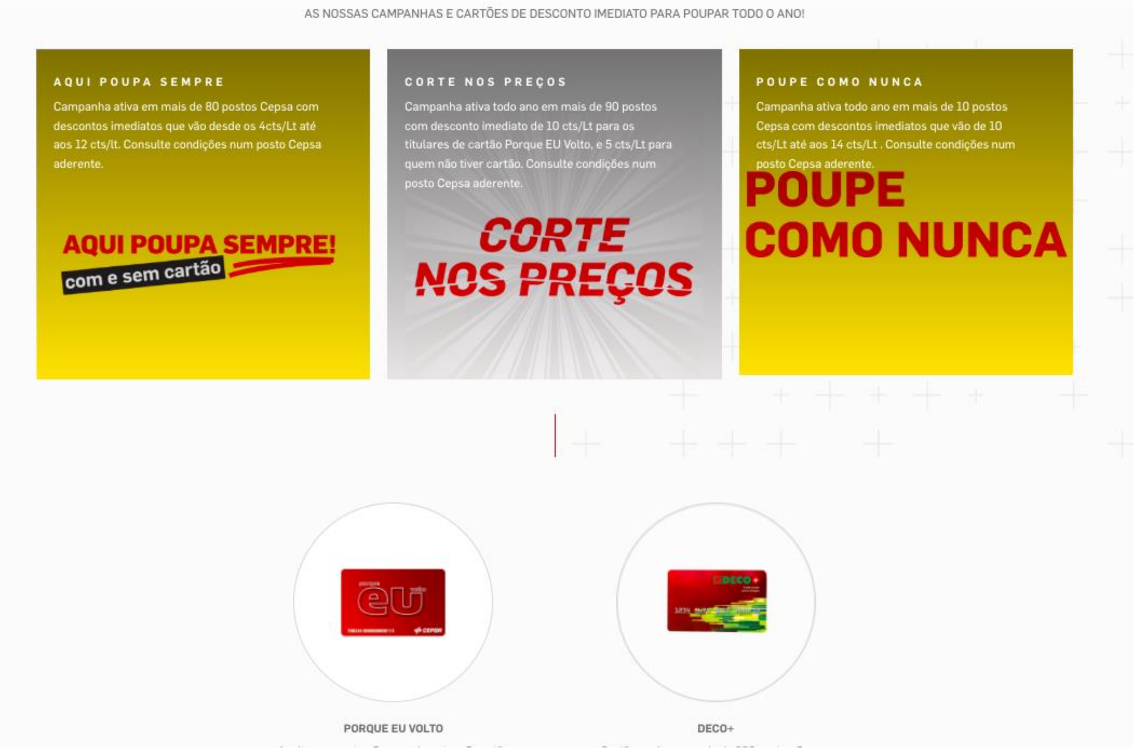
ACEITE ESTE NOVO DESAFIO

Tem um negócio de distribuição gás ou ponto de venda?
Quer começar a vender gás Cepsa?

APRESENTAMOS O POSITIVE MOTION.

Figure 9 - Cepsa's Website Display

Nevertheless, Cepsa still has a brand card for different ongoing promotions, some only valid in certain locations, called "Porque eu Volto" (Figure 10) simply for discounts on oil and petrol prices, similar to the Galp+ card previously mentioned, in physical or digital format.



AS NOSSAS CAMPANHAS E CARTÕES DE DESCONTO IMEDIATO PARA POUPAR TODO O ANO!

AQUI POUPA SEMPRE

Campanha ativa em mais de 80 postos Cepsa com descontos imediatos que vão desde os 4cts/Lt até aos 12 cts/lt. Consulte condições num posto Cepsa aderente.

CORTE NOS PREÇOS

Campanha ativa todo ano em mais de 90 postos com desconto imediato de 10 cts/Lt para os titulares de cartão Porque EU Volto, e 5 cts/Lt para quem não tiver cartão. Consulte condições num posto Cepsa aderente.

POUPE COMO NUNCA

Campanha ativa todo ano em mais de 10 postos Cepsa com descontos imediatos que vão de 10 cts/Lt até aos 14 cts/Lt . Consulte condições num posto Cepsa aderente.

AQUI POUPA SEMPRE!
com e sem cartão
CORTE
NOS PREÇOS
POUPE
COMO NUNCA
eu
DECO+
PORQUE EU VOLTO
DECO+

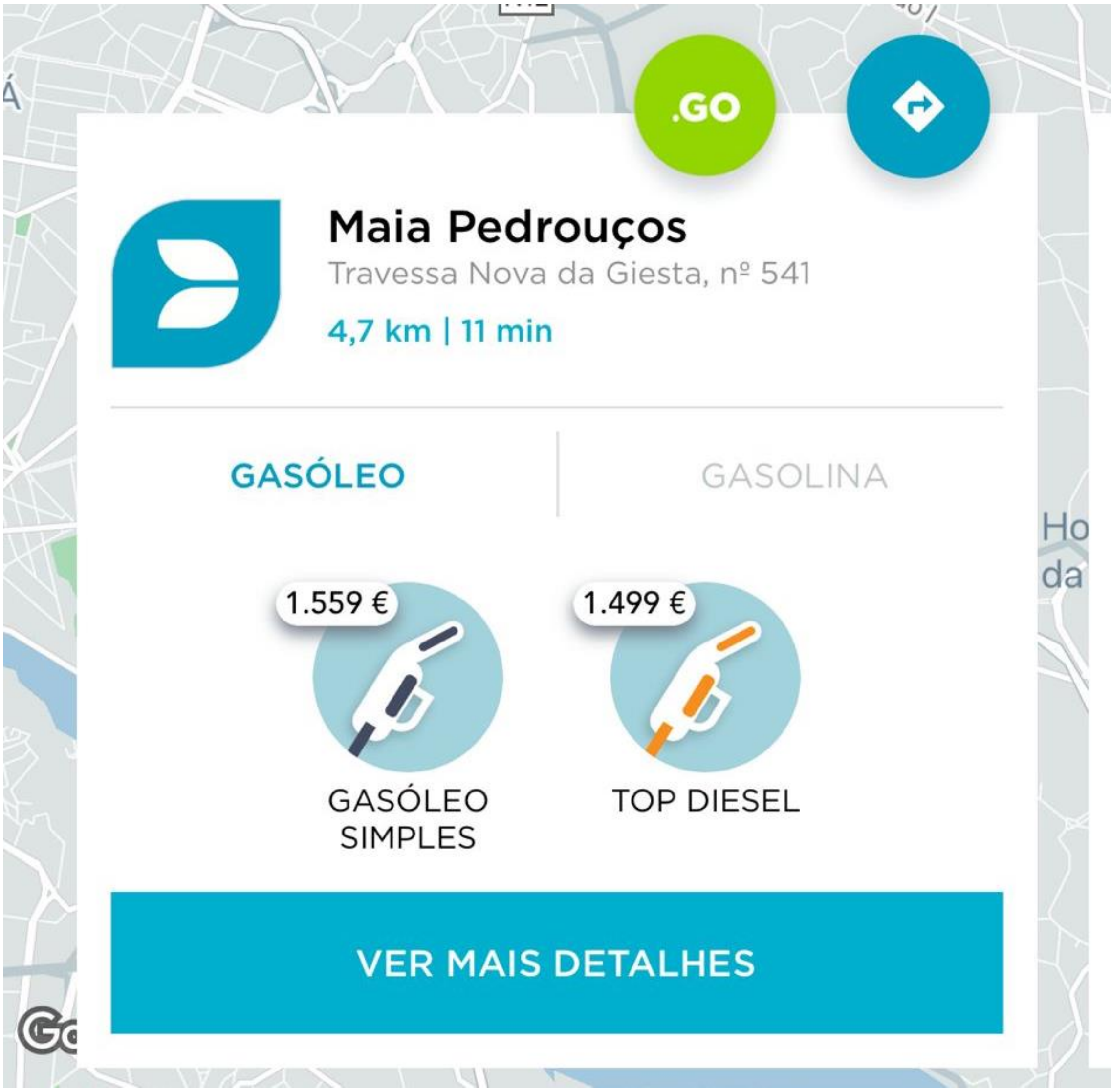
Figure 10 - Cepsa's "Porque eu Volto" Card

To conclude, in 5th place, there is Prio, which is similar to Cepsa, in the sense that it only has a general website containing all of the information about the brand, and only a small subsection for promotions and campaigns. The same applies to the digital app called PrioGo, which despite its different name, also shares the general focus of the website. Out of the 5 brands, it has the most time-efficient way of registering, with the customer being able to connect its Facebook, Google, or Apple as a way of being registered in the application (Figure 11).

Continuar com a Apple
Continuar com o Facebook
Continuar com o Google

Figure 11 - Prio Go's ability to login via Apple, Google, and Facebook

Equivalent to all mentioned before, the app gives the option to the customer to attain the information to use for marketing purposes, although unlike the other it does not specify which type of marketing is the information being used for.
The application is structured and aesthetically pleasing, with features like a GPS travel planner according to what type of fuel the customer will utilize and a recommended gas station to stop in the middle of the trip, with the gas prices there displayed (Figure 12), holding room for improvement in terms of marketing for campaigns and to raise customers.



.GO

Maia Pedrouços

Travessa Nova da Giesta, nº 541

4,7 km | 11 min

GASÓLEO
GASOLINA

1.559 €	1.499 €
GASÓLEO SIMPLES	TOP DIESEL

VER MAIS DETALHES

Figure 12 - Prio Go's GPS and Fuel Price display

1.5. The digital marketing strategies of Fuel Brands in Portugal

Consumers seek to maximize the value of their service and product selections by comparing several decision-making variables (Chung & Koo, 2015). Several customers' decisions are influenced by different social groupings, even if they make their judgments (East et al., 2008).

Latter to define the different types of digital strategies that oil, and gas companies can utilize, it´s essential to dissect which ones are made of use by each of the companies in analysis to see the amount of usage of digital marketing segmented accordingly. Even though every brand mentioned earlier has a digital platform, only a few uses it for promotion and marketing purposes, and those are the ones that will be considered for each type of strategy. Table 1 describes the do's or don'ts of each brand to promote their campaigns and gain visibility in digital marketing and consequently reach new interested customers.

STRATEGY	**E-MAIL MARKETING**	**DIGITAL PLATFORM MARKETING**	**SEO AND PPC MARKETING**	**SOCIAL MEDIA MARKETING**	**INFLUECER MARKETING**
GALP	X	X	X	X	
REPSOL	X	X		X	
BP	X	X		X	
CEPSA	X			X	
PRIO	X			X	

Table 1 - Digital Marketing Strategies of Fuel Brands in Portugal

Chapter 2
Methodology

2. 1. Research Question

The purpose of this research is to measure how much influence digital marketing has when choosing a Fuel Brand in Portugal.

2. 2. Research Method

To accordingly analyze the research question, a quantitative research method was selected. Babbie, Earl R. (2010) quote that quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or explaining a particular phenomenon. The goal of conducting a quantitative research study is to determine the relationship between one thing [an independent variable] and another [a dependent or outcome variable] within a population (Muijs, Daniel, 2010).

2. 3. Data Collection

To specify, the quantitative research method utilized was a structured questionnaire, which had a target audience of 200 to 300 random Portuguese people, mostly between the ages of 18-65, who are continuously in touch with the oil and gas market and the social media world, with the sole purpose of analyzing their internet and social media habits mixed with their fuel usage and valorization. The data of the analysis, as said before, was collected from respondents using a structured questionnaire.

The questionnaire was established after analysis of the literature review, and had a total of 309 answers, with only 249 being valid and complete, so for the sake of minimizing the errors of the analysis, these were the responses utilized. The questionnaire was published on the platform "Limesurvey" on the 22nd of January, and was promoted, accordingly to the topic, in all of social media, mainly on "Facebook" and "Instagram". The questionnaire stayed open for exactly 1 month, with most of its responses being given in the first two weeks with randomness being ensured by posting the questionnaires on many social media platforms. To avoid repeated submissions, the survey was set to let participants submit only one response.

The content of the questionnaire consisted of five parts, each one analyzing different aspects of the respondents. The first part consists of 4 introductory questions to cluster the individuals according to age, gender, estimated internet time per day and the monthly average of how many times does the individual put fuel. The second part consists of 9 "Yes" or "No" questions relating to the social media and digital platform habits of individuals, adapted to the dissertation topic. The third part is 1 multiple-choice question about the most frequent method or platform where the individual usually gets information about a new product or a new campaign. Lastly, in the fourth and fifth parts of the questionnaire respondents were asked to mark their perception on a 5-point Likert scale ranging from "strongly disagree (1)" to "strongly agree (5)", with 7 questions being to analyze the general opinion of the Portuguese consumer about the gas station market and the oil and gas topic and 9 questions to specifically understand in what categories of a gas station could digital marketing and social media have some sort of influence, respectively. The questions asked participants to rate how strongly they agreed with each statement.

Data management and analysis were split accordingly, by utilizing Pivot Table Tool from Microsoft Excel, for a demographic and question inter-comparison analysis, and the statistical program R for a detailed question-correlation, segmentation, and regression analysis.

In R, a correlation matrix was first done, to check the correlation between the questions of the same type. After that a sample segmentation was done by performing a Clustering Analysis to segment the respondents into types of groups, take conclusions about each group and indicate the most appropriate digital marketing approach for each segment. The third and final approach, which allows us to determine which of the survey questions have a significant impact on the likelihood of a customer choosing a particular gas station based on its digital marketing efforts, is logistic regression analysis.

2.4. Data Cleaning and Pre-Preprocessing

First, there was a need to clean and pre-process our questionnaire dataset before analyzing it. Since the questionnaire was online, and all questions were required to complete the survey, there was supposed to be no missing data in the analysis, however, due to an internal error of the questionnaire platform, Question 9 answers were not registered properly, meaning that it had to be completely removed from the dataset. Latter to its removal, there were no missing values found in the dataset.

Mahalanobis distance is a statistical tool used to find outliers, data points that deviate greatly from the average and remove them from the sample. Observations having values other than the average or with extreme numbers are considered outliers and were removed from the study because they may bias the results of the statistical tests (Tabachnick & Fidell, 2007), therefore 5 subjects were removed from the analysis.

2.5. Reliability Analysis

Reliability analysis was then performed to provide information on the internal consistency of the items, which is an important aspect of their validity. The ability to produce consistent and reliable outcomes is assessed using a reliability test (Carmines & Zeller, 1979). Cronbach's alpha (α) is used to assess tool dependability. According to Nunnaly (1978), a Cronbach alpha of 0.7 is considered adequate, but some research has utilized a lower number. The maximum alpha value should not be greater than 0.9. (Tavakol & Dennick, 2011).

In this situation, the alpha coefficients for the entire set and each item are determined independently. Table 2 shows that the raw alpha coefficient is 0.74, indicating acceptable reliability but room for improvement. The typical alpha coefficient is 0.74, which is likewise within acceptable limits. Furthermore, the G6(SMC) coefficient is 0.80, indicating strong internal consistency, and the average inter-item correlation is 0.11, indicating moderately connected items, which is ideal.

Raw_Alpha	Std_Alpha	G6(smc)	Average_R
0.74	0.74	0.8	0.11

Table 2 - Reliability Analysis Results

Chapter 3

The Influence of Digital Marketing when choosing a Fuel Brand.

3.1. Demographic and Social Media Habits Analysis

Later the dataset was clean and confirmed as reliable, the Pivot Table method in Microsoft Excel was performed, by utilizing the demographic variable as the target variable of comparison in the analysis. Table 3 shows that the sample in question has 52% of its respondents female, 47% male and 1% other, with 58% being within 18-36 years of age and 42% within 37-60 years of age.

SAMPLE	CATEGORY	PERCENTAGE
GENDER	**MALE**	52%
	FEMALE	47%
	OTHER	1%
AGE	18-24	51%
	25-36	7%
	37-48	19%
	49-60	19%
	60+	4%

SAMPLE	CATEGORY	PERCENTAGE
INTERNET TIME	0H-2H	23%
	2H-4H	37%
	4H-6H	28%
	6H-8H	7%
	8H+	5%
FUEL AVERAGE PER MONTH	0-1	17%
	2-3	43%
	4-5	22%
	5+	14%

Table 3 – Demographic Comparison of the Sample

The average duration spent by the sample respondents on the internet varies between 2 to 6 hours, with only 12% spending more than 6 hours a day on the internet and 23% spending less than 2 hours, but when it´s filtered to the respondents between 18-36 years of age (Figure 13), the percentage of people spending less than 2 hours on the internet per day decreases 17%, and the percentage spending more than 4 hours on the phone increases 17%, and to contrary, when we filter the respondents to over 36 years of age (Figure 14), the percentage spending less than 2 hours increases to 47%, almost half of the sample, with an increase of 24%, and a decrease of 23% of people spending over 4 hours on the phone.

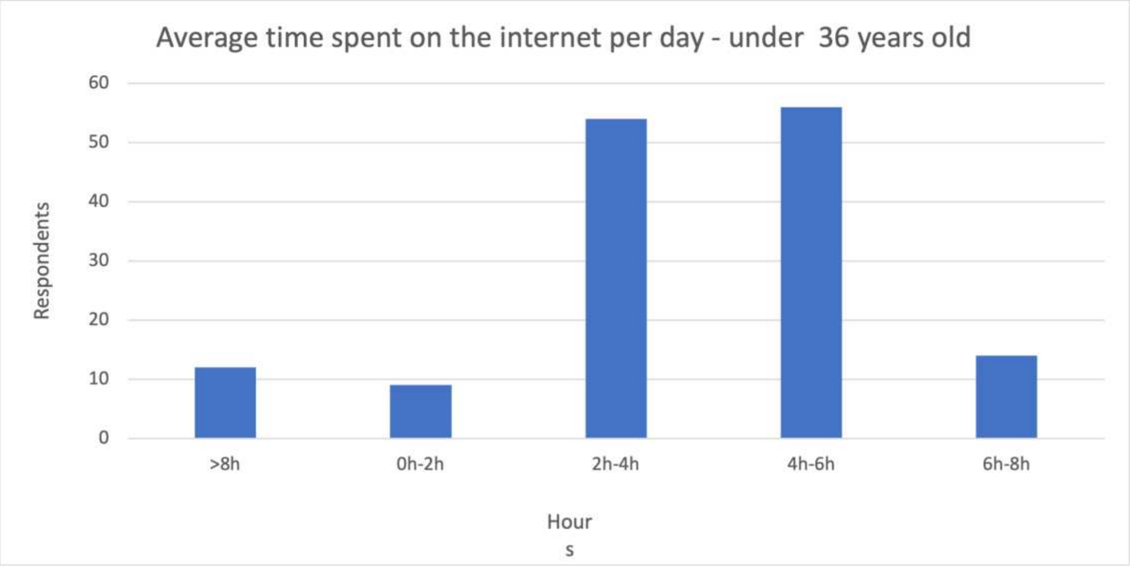


Figure 13 - Average time spent on the internet per day under 36 years old.

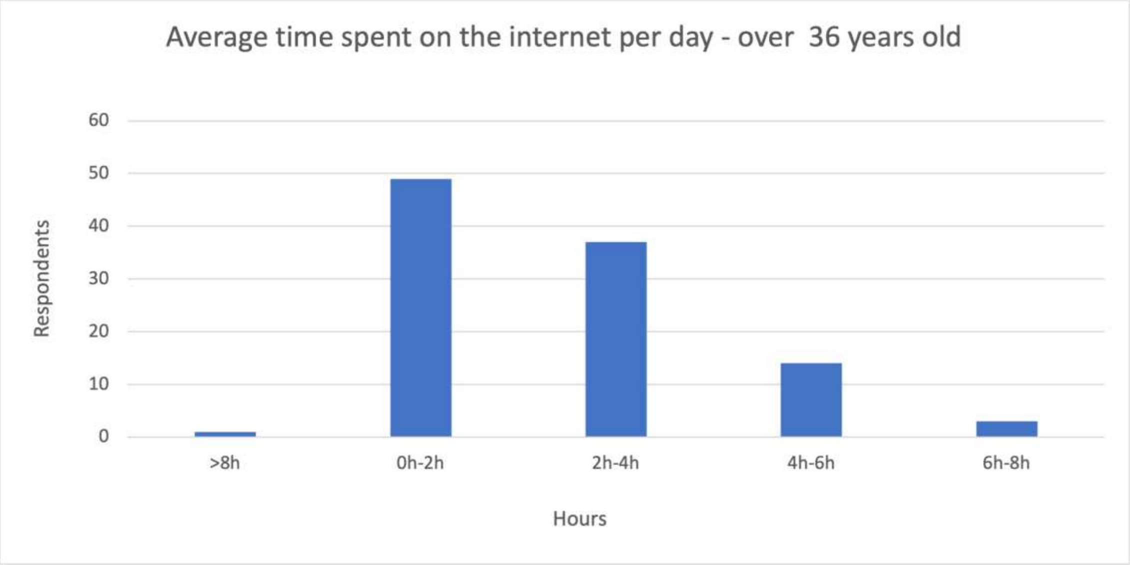


Figure 14 - Average time spent on the internet per day over 36 years old.

A respondent from the sample buys fuel, on average, 2 to 3 times a month. Filtering to respondents between 18-36 years of age (Figure 15), the average stays relatively equal, noticing only a slight increase in the respondents that put fuel 0 to 1 time a month. The same happens when the age variable is filtered to over 36 years old (Figure 16), the average stays relatively the same, only this time there is a noticeable increase in respondents that put fuel 4 to 5 times a month on average.

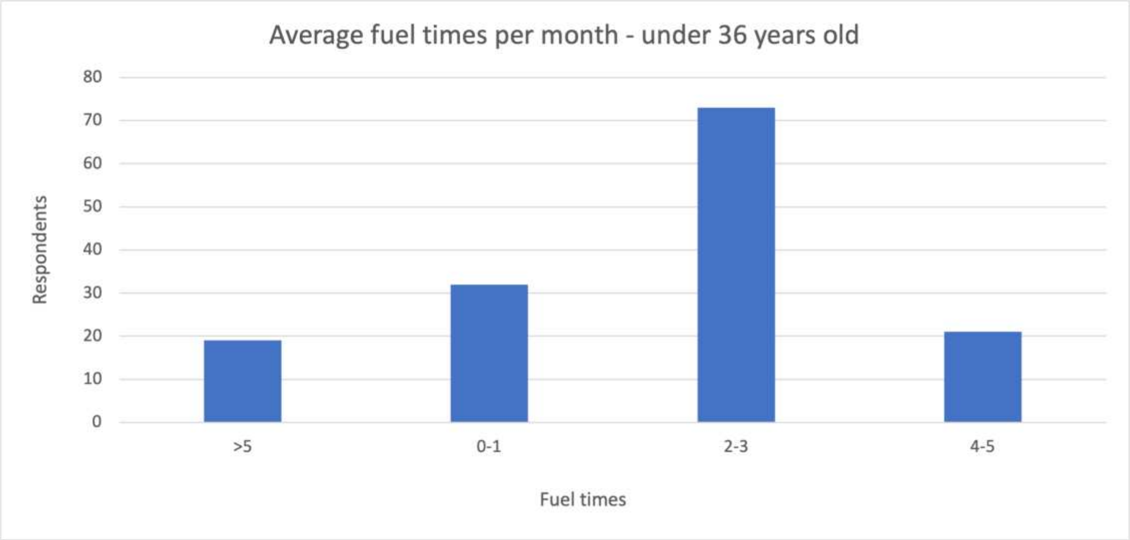


Figure 15 - Average fuel times per month for people under 36 years old

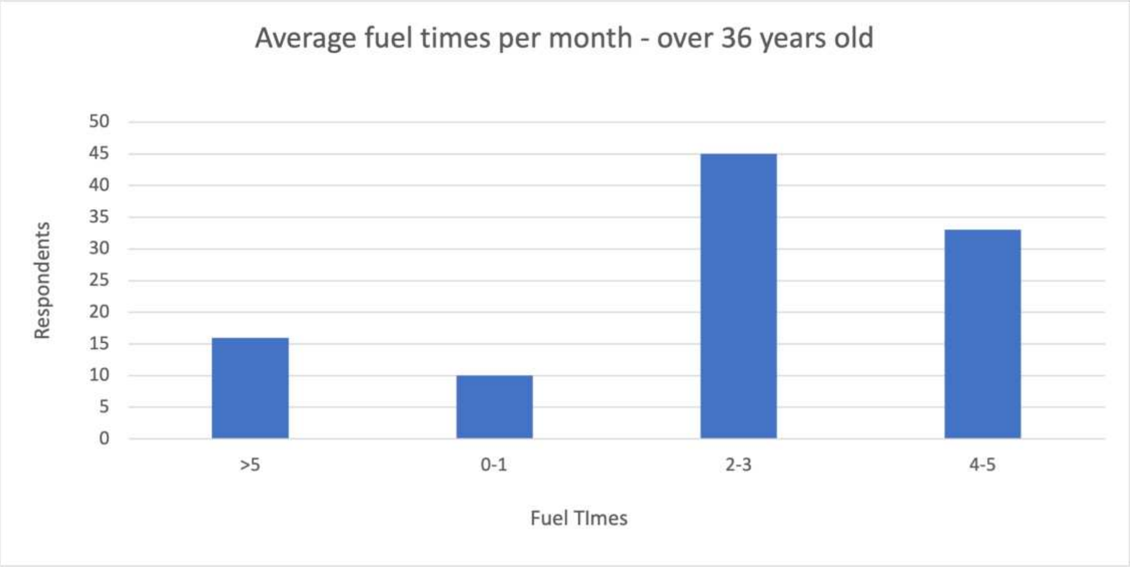


Figure 16 - Average fuel times per month for people over 36 years old

Following that, the main goal was to uncover the lying social media habits of the respondents and associate it with the following demographic group by applying a filter to each question, that allows comparison to one another. Within the entirety of the sample (Figure 17), 77% of respondents usually spend most of their time on the internet on social media apps, with an increase when filtering to 92% when between the ages of 18 to 36 and a decrease to 55% when over 36 years old.

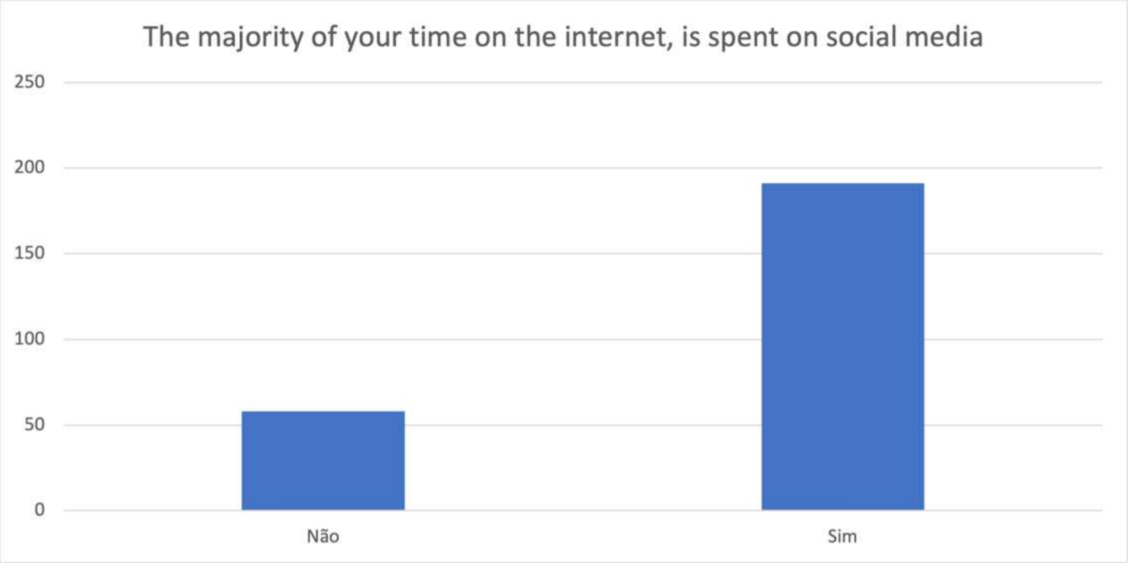


Figure 17- The majority of your time on the internet, is spent on social media.

By filtering the sample by average time spent on the internet daily, there is a decrease of 5% when the respondents spend 2 hours or less on the internet, and an increase of 7% when respondents spend over 4 daily hours on average using the internet.

Only 67% of respondents utilize social media to find or keep in touch with new products of any brand, with that number decreasing linearly as a respondent gets into an older age group, and when filtered to the respondent´s answer on the internet time being mostly social media time, an "Yes" answer implies an increase of 9% and a "No" answer a decrease of 31% of people who utilize social media to find new products (Figure 18).

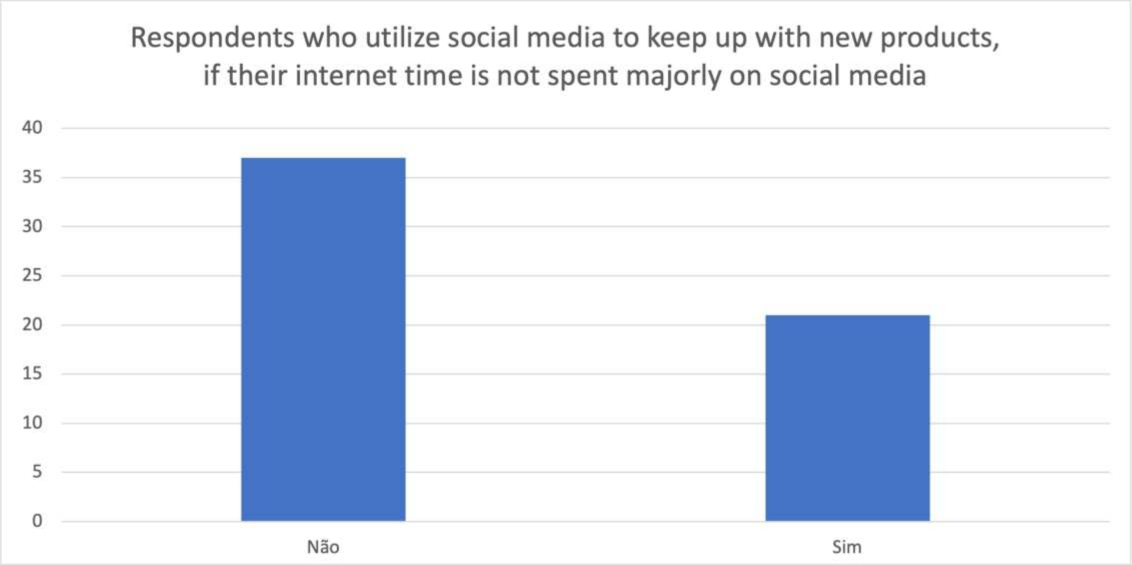


Figure 18 - Respondents who utilize social media to keep up with new products, when their internet time is not spent majorly on social media.

Likewise, 64% of respondents use social media to keep up with new promotions or special offers from brands they normally acquire, with an increase of 24% if an individual spends most of their internet time on social media (Figure 19).

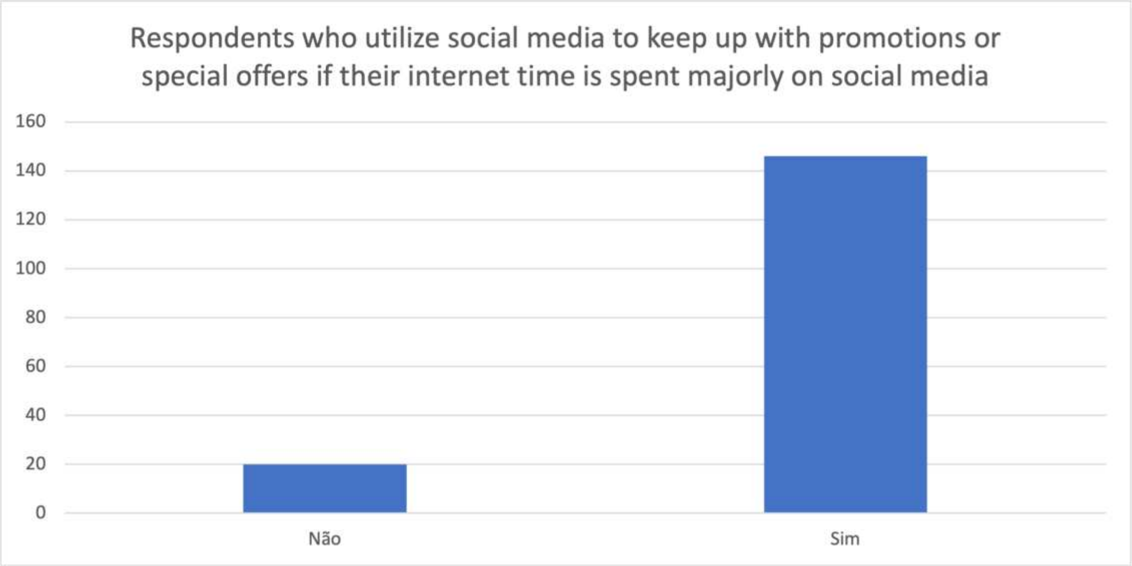


Figure 19 - Respondents who utilize social media to keep up with promotions or special offers, when their internet time is spent majorly on social media.

Statistically like the previous inquiry, 62% of respondents utilize social media to check reviews and comments on unfamiliar brands. The percentage of respondents increases by 13% when the age gap is filtered to between 18 and 36 years old and reduced to 47% for people over the age of 36. Connected to the answer is also the average time they spent on the internet per day, whereas if they spent more than 4 hours the percentage increases by 8% and if less than 4 hours decrease to 55% (Figure 20).

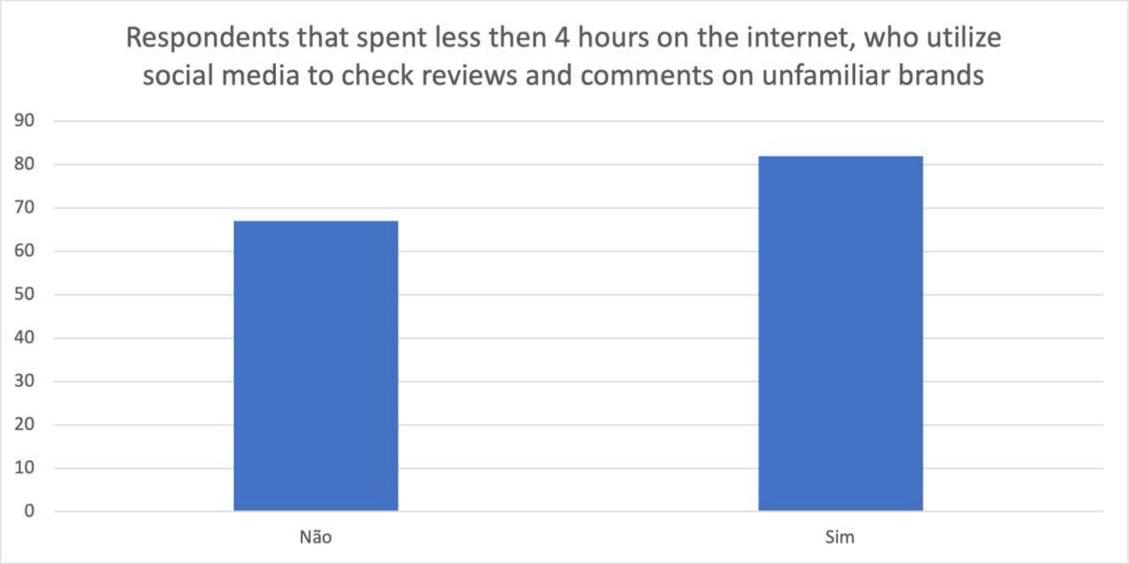


Figure 20 - Respondents that spent less then 4 hours on the internet, who utilize social media to check reviews and comments on unfamiliar brands.

According to these statements, it can be concluded that the average time an individual spends on the Internet per day is negatively correlated to their age, meaning that if the value of the age variable increases the respondent is more likely to spend less time on the internet. Adding to that, the negative correlation that the "age" variable holds, transcends to social media questions, like if the majority of a respondent's internet time is spent on social media or if a respondent uses social media to discover new products, special offers or even check reviews and the reputation of a certain brand, the percentage of the sample that answered "yes" to these types of questions is always lower when the age of a respondent is increased. The opposite happens when the variable discussed is the average time a respondent buys fuel per month, which positively correlates to its age.

Moving forward, almost 80% of the sample spends most of their internet time on social media. When filtered to these, whose ages vary almost exclusively between 18 and 36 years old, the percentage of the sample who take advantage of social media to find new products, keep up with discounts and promotions and check reviews on unfamiliar brands increases exponentially.

When inquired if they have installed a mobile application of any brand, they were clients, the majority answered yes, with a percentage of 77%, boosted even further to 84% (Figure 21) if the respondent spends most of their internet time on social media.

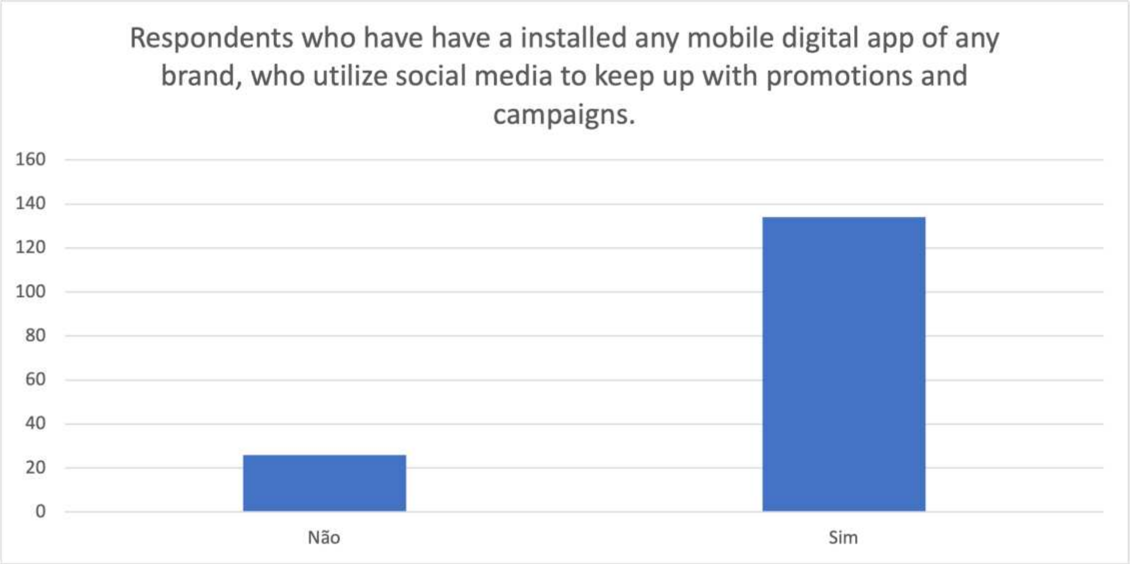


Figure 21 - Respondents who have have a installed any mobile digital app of any brand, who utilize social media to keep up with promotions and campaigns.

The scenario changes when inquired exclusively about Fuel Brands:

- 90% of the total sample does not follow any Fuel Brand on social media (Figure 22)

- 82% does not have any digital application of a Fuel Brand installed on their mobile phone (Figure 23).
- 41% of individuals who have installed a digital platform of a fuel brand also follow a Fuel Brand on social media.
- 75% of respondents who follow a Fuel Brand on social media have installed a digital platform application of a Fuel Brand.

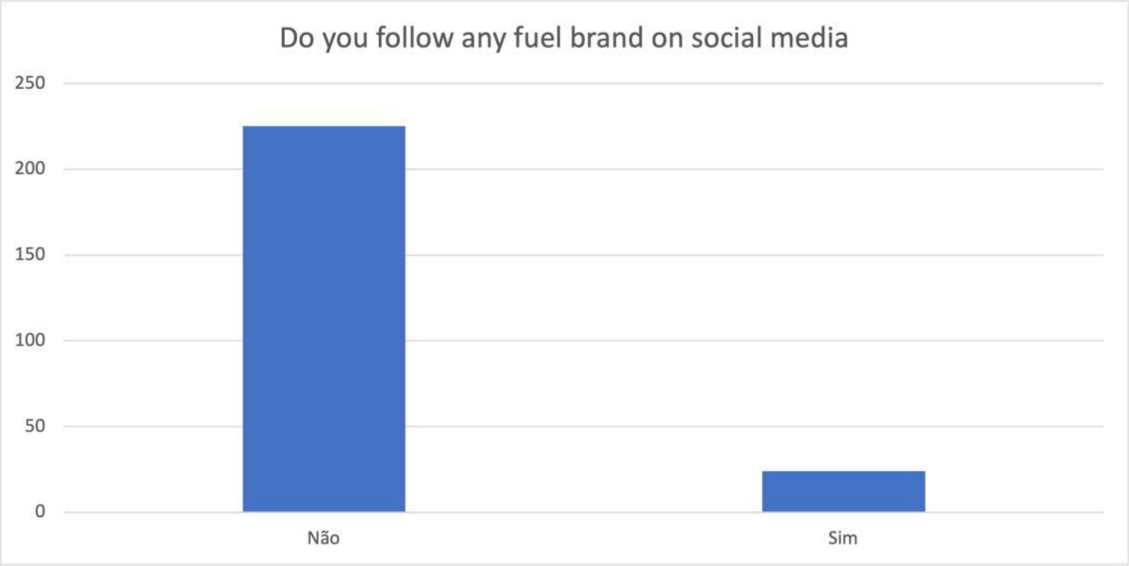


Figure 22 - Do you follow any Fuel Brand on social media?

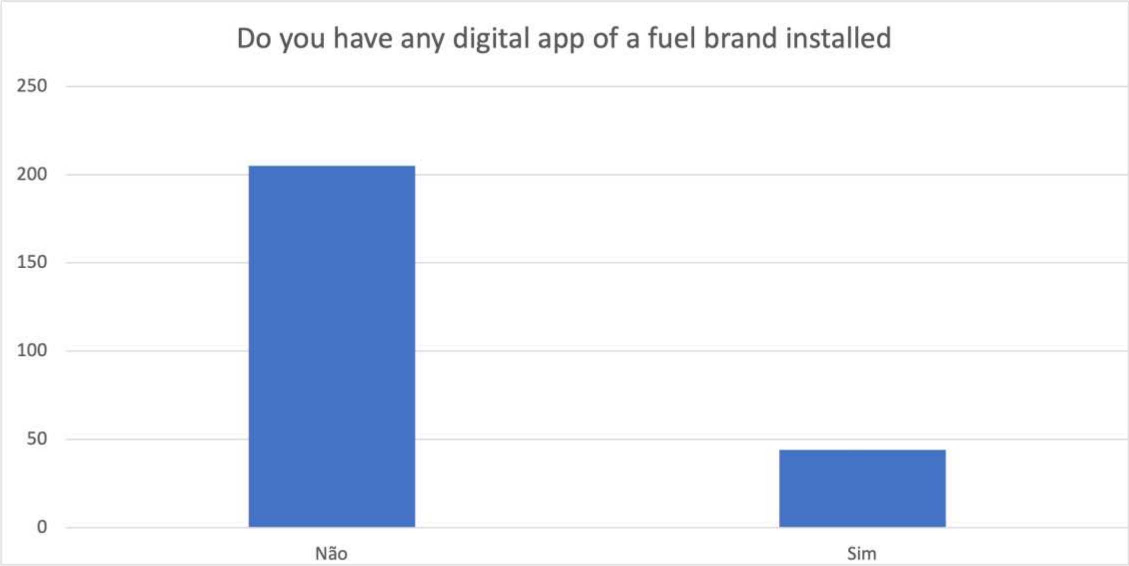


Figure 23 - Do you have any digital application of a Fuel Brand installed?

There is also a 60% difference between people who have installed any app that they are a client of and people who have a digital app of a Fuel Brand on their mobile phone, with the percentage dropping from 77% to 18%.

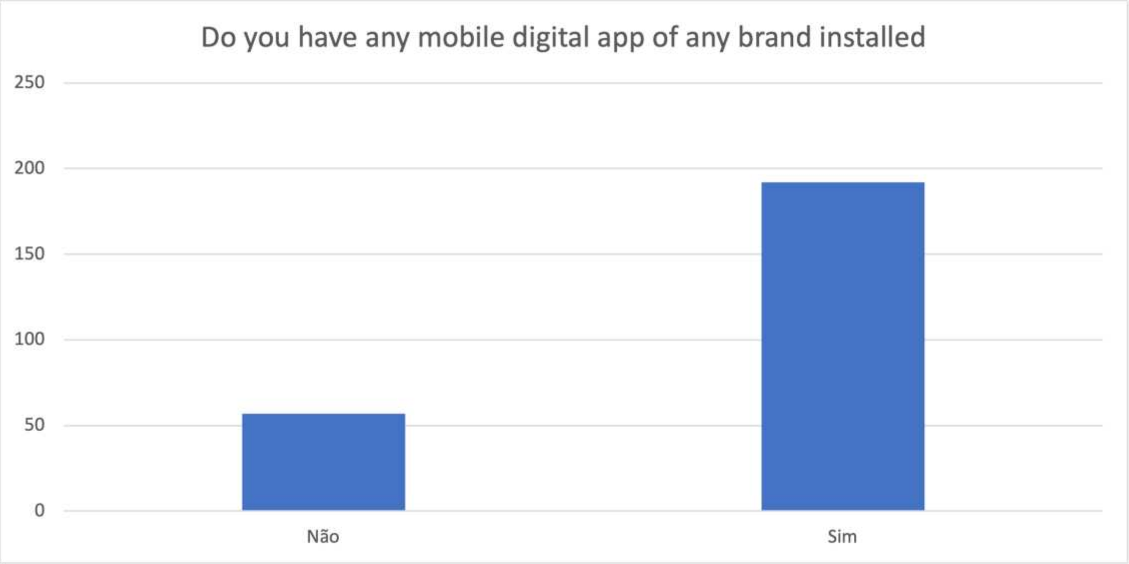


Figure 24 - Do you have any mobile digital app of any brand installed?

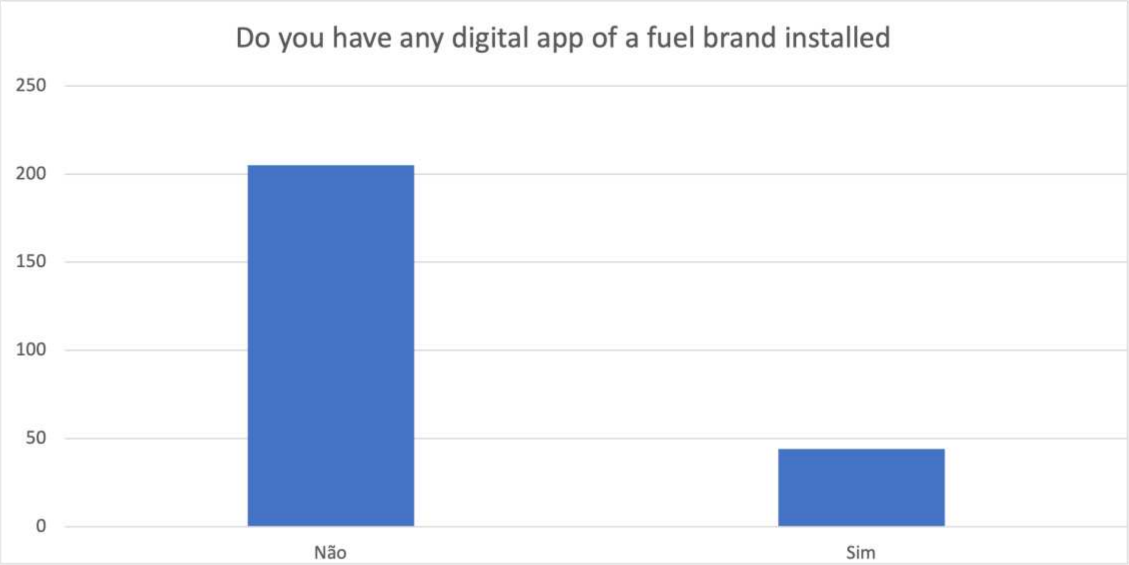


Figure 25 - Do you have any digital app of a Fuel Brand installed?

In the sample, 71% have already used a coupon of a Fuel Brand, with the percentage being increased together with the monthly average of fuel. The percentage can also be increased to 92% (Figure 26) and 95% (Figure 27), if a respondent follows any Fuel Brand on social media or has a digital platform application installed on their mobile phone, respectively.

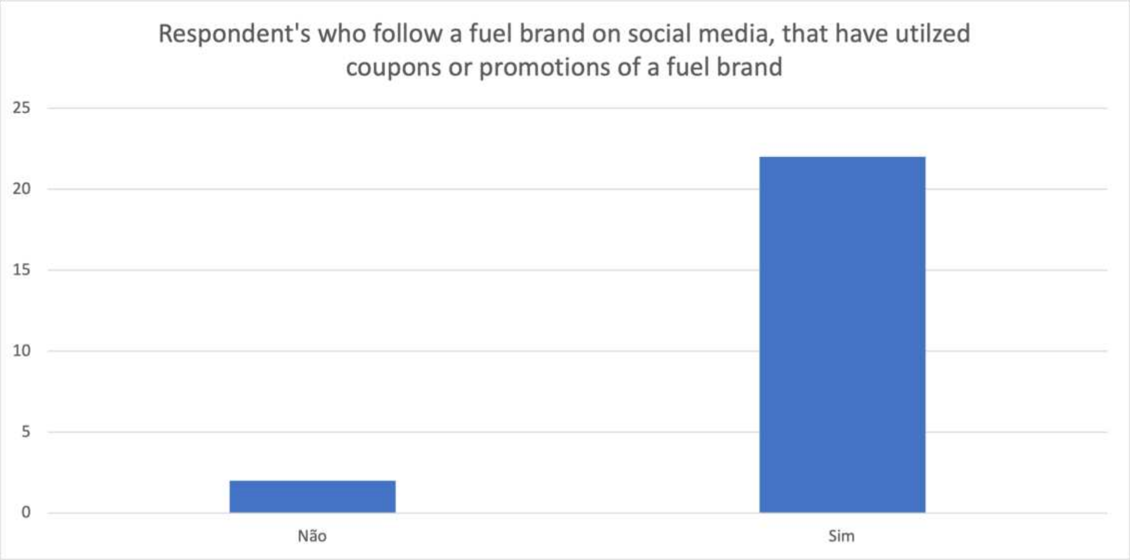


Figure 26 - Respondents who follow a Fuel Brand on social media, that have utilized coupons or promotions of a fuel brand.

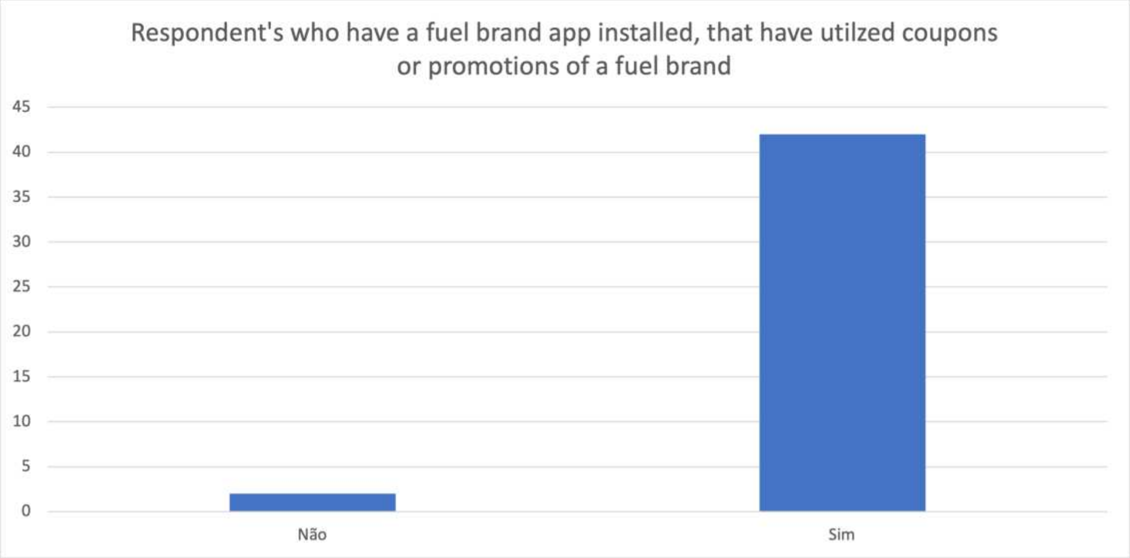


Figure 27 - Respondents who have a Fuel Brand's digital app installed, that have utilized coupons or promotions of a Fuel Brand.

To conclude, a survey was done on which was the favourite digital marketing strategy where a respondent usually keeps up with new products, discounts or promotions of any brand was performed. The participant chose between two out of the five presented strategies. According to Table 4, Social media marketing was one of their favourite methods, with a percentage of 65%. Next, e-mail marketing with 39%, pop-up advertisement marketing at 35%, text message marketing at 26% and finally influencer marketing with only 19%.

STRATEGY	PERCENTAGE
SOCIAL MEDIA MARKETING	65%
E-MAIL MARKETING	39%
POP-UP ADVERTISMENT MARKETING	35%
TEXT MESSAGE MARKETING	26%
INFLUENCER MARKETING	19%

Table 4 - Digital Marketing Strategy selection

3.2. How Digital Marketing correlates with other meaningful factors when choosing a Fuel Brand

The relevant questions for analysis were selected from the dataset and segmented into a new variable according to the content of its analysis. Four new variables were then created:

- “Social Behavior” (questions “5”,”6”,”7”,”8” and “10”);
- “Digital Marketing” (“24”,”26”,”28”,”29” and ”30”);
- “Price and Loyalty” (“15”,”16”,”19”,”20”,”22”,”23” and “25”)
- “Quality and Reputation Sensitivity", like the former, is associated with the responsiveness of a participant when it comes to the quality of a Fuel Brand and the reputation which one holds.

This correlation matrix shows the pairwise correlations between the four variables. The diagonal members of the matrix reflect each variable's correlation with itself, which is always equal to 1.00. The correlation between pairs of variables is represented by the off-diagonal elements.

VARIABLE	**SOCIA_BEHAVIOUR**	**DIGITAL_MARKETING**	**PRICE_LOYALTY**	**QUALITY_REPUTATION**
SOCIAL_BEHAVIOR	**1.0000000**	**0.3035230**	**0.1207640**	**0.1566696**
DIGITAL_MARKETING	**0.3035230**	**1.0000000**	**0.4448982**	**0.6014651**
PRICE_LOYALTY	**0.1207640**	**0.4448982**	**1.0000000**	**0.5045140**
QUALITY_REPUTATION	**0.1566696**	**0.6014651**	**0.5045140**	**1.0000000**

Table 5 - Correlation Matrix

From Table 5, it can be observed from the off-diagonal elements that “Social Behavior” has a moderately positive connection (0.303) with “Digital Marketing”, a weak positive correlation (0.121) with “Price and Loyalty”, and a weak positive correlation (0.121) with “Quality and Reputation” (0.157).

These correlations suggest that individuals who find usefulness in social media are more likely to have the knowledge and adhere to the digital marketing campaigns provided by Fuel Brands on social platforms, even though there is no direct no correlation between the social media habits of an individual and their sensitivity to the variables of the price or reputation of a gas station, as expected.

“Price and Loyalty” and “Quality and Reputation” have a positive correlation of (0.501), indicating that individuals who show more responsiveness towards the variables of price and loyalty regarding a gas station tend to have similar behaviours when regarding the quality of and reputation of one.

“Digital Marketing” for Fuel Brands is strongly correlated to the variables “Price/Loyalty” and “Quality/Reputation”, with correlations of (0.445) and (0.601) respectively, meaning that individuals who care for special promotions and campaigns of Fuel Brands presented on digital platforms are more likely to be affected with the fluctuations of fuel price and even more to the quality and reputation the brand holds, due to latter being the strongest relation in the entire matrix.

3.3 Understanding the different consumer behavior.

Since the data was already clean and pre-processed, only standardization was required to start the analysis, to guarantee that all variables were on the same scale. This happens due to the sensitivity of the clustering process to varying scales. Latter the data being standardized, the elbow method technique was performed to uncover the optimal number of clusters. It entails graphing the within-cluster sum of squares (WCSS) versus the number of clusters and locating the "elbow" point in the plot, which marks the point of diminishing returns as the number of clusters increases, which in this case was 4 (Figure 28).

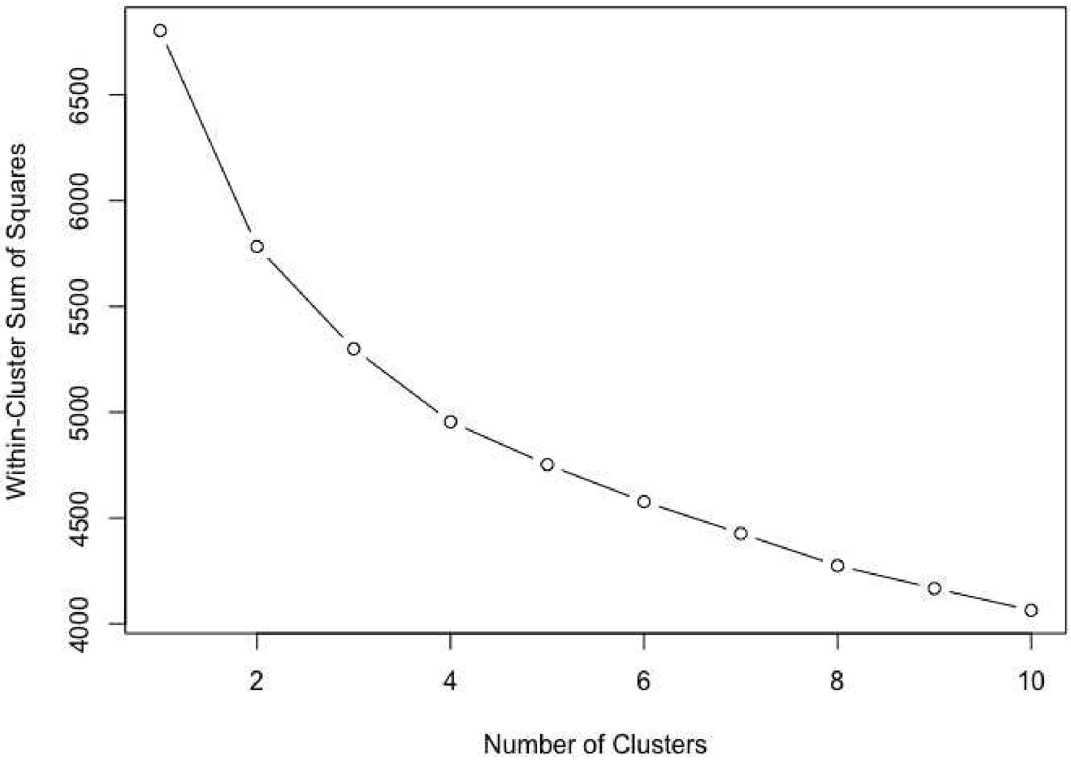
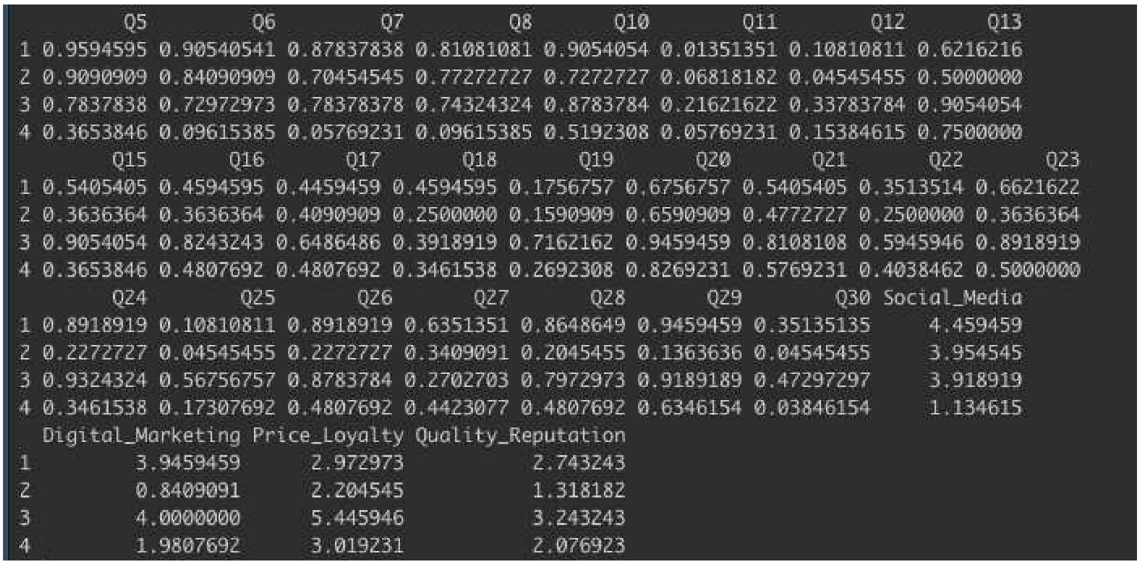


Figure 28 - Elbow Method

The k-means algorithm was then used to cluster the responses into similar groups. The 249 were then assigned to a cluster, with the "kmeans_res" function containing the cluster assignments for each observation and the centroid coordinates for each cluster. For result interpretation, a summary table that shows the mean values of each variable for each cluster was created, on which the respective conclusions can be approached individually (Figure 29).



```
         Q5         Q6         Q7         Q8       Q10        Q11        Q12       Q13
1 0.9594595 0.90540541 0.87837838 0.81081081 0.9054054 0.01351351 0.10810811 0.6216216
2 0.9090909 0.84090909 0.70454545 0.77272727 0.7272727 0.06818182 0.04545455 0.5000000
3 0.7837838 0.72972973 0.78378378 0.74324324 0.8783784 0.21621622 0.33783784 0.9054054
4 0.3653846 0.09615385 0.05769231 0.09615385 0.5192308 0.05769231 0.15384615 0.7500000
        Q15       Q16       Q17       Q18       Q19       Q20       Q21       Q22       Q23
1 0.5405405 0.4594595 0.4459459 0.4594595 0.1756757 0.6756757 0.5405405 0.3513514 0.6621622
2 0.3636364 0.3636364 0.4090909 0.2500000 0.1590909 0.6590909 0.4772727 0.2500000 0.3636364
3 0.9054054 0.8243243 0.6486486 0.3918919 0.7162162 0.9459459 0.8108108 0.5945946 0.8918919
4 0.3653846 0.4807692 0.4807692 0.3461538 0.2692308 0.8269231 0.5769231 0.4038462 0.5000000
        Q24        Q25       Q26       Q27       Q28       Q29        Q30 Social_Media
1 0.8918919 0.10810811 0.8918919 0.6351351 0.8648649 0.9459459 0.35135135     4.459459
2 0.2272727 0.04545455 0.2272727 0.3409091 0.2045455 0.1363636 0.04545455     3.954545
3 0.9324324 0.56756757 0.8783784 0.2702703 0.7972973 0.9189189 0.47297297     3.918919
4 0.3461538 0.17307692 0.4807692 0.4423077 0.4807692 0.6346154 0.03846154     1.134615
  Digital_Marketing Price_Loyalty Quality_Reputation
1         3.9459459      2.972973           2.743243
2         0.8409091      2.204545           1.318182
3         4.0000000      5.445946           3.243243
4         1.9807692      3.019231           2.076923
```

Figure 29 - Summary Table of the Clustering Analysis

"**Cluster 1**" (Digitally Engaged) represents the most digitally engaged respondents.

- Spend a great portion of their internet time on social media, utilize it to stay up to date on new products and promotions, and follow brands they are customers from on social media.
- Tends to place a premium on the quality, reputation, and reviews associated with Fuel Brands, and are willing to pay a little extra for greater service and convenience.
- Tend to download applications from the brands they use.
- Use coupons and promotions provided by Fuel Brands.

- Are much more likely to be interested in the social platforms of a Fuel Brand since they would also rather have a much more modern approach to disseminating fuel price campaigns and promotions.

"**Cluster 2**" (Slightly Engaged) respondents are slightly digitally engaged, but not as much as those in Cluster 1.

- They use social media less frequently but still share some of the same habits as being interested in new products and promotions.
- This cluster can be associated with younger age, due to these respondents being more price-sensitive and preferring gas stations with the lowest prices, regardless of their quality and reputation.
- They are also less likely to use Fuel Brand coupons or promotions, most likely due to their unawareness of the effects that these have on fuel prices, and therefore need more broadcasting on the benefits of having the social platforms of Fuel Brands.

"Cluster 3" (Almost Digitally Inactive) reflects consumers who are less digitally active but nonetheless care about the reputation, quality, and evaluations of Fuel Brands.

- Respondents are more inclined to select gas stations based on the reputation of the brand and are willing to pay more for better service and convenience.
- Additionally, they are more likely to be interested in Fuel Brand apps, discounts, and promotions they just seem to be unfamiliar with their digital platforms and the respective campaigns offered by each, due to their lack of time spent on the internet, especially social media.

"Cluster 4" (Non-Digital) reflects customers that are the least digitally engaged and the most price sensitive.

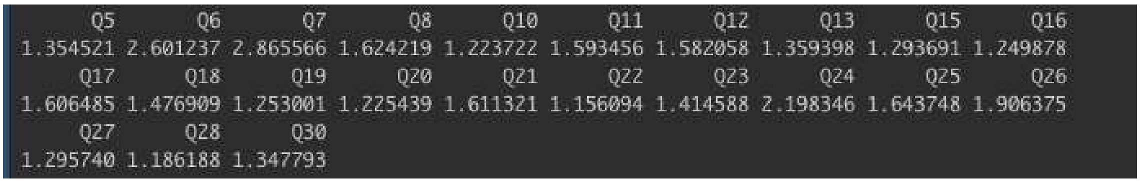
- They care less about the reputation, quality, and reviews of Fuel Brands.

- Are more likely to choose gas stations based on the lowest price, regardless of the brand's reputation, meaning that they are also less likely to use Fuel Brand coupons or promotions and to adhere to any sort of social platforms of any Fuel Brand.

3.4 Measurement of Digital Marketing when choosing a Fuel Brand.

To understand the influence of digital marketing when choosing a Fuel Brand, a logistic regression model was built using the "glm" function, with "Q28", which states that a respondent would prefer a more modern dissemination method for fuel price campaigns and promotions, serving as the binary dependent variable and 22 independent variables ("Q5" to "Q30") included as predictors. The "family" argument is set to "binomial", indicating that the response variable follows a binomial distribution.

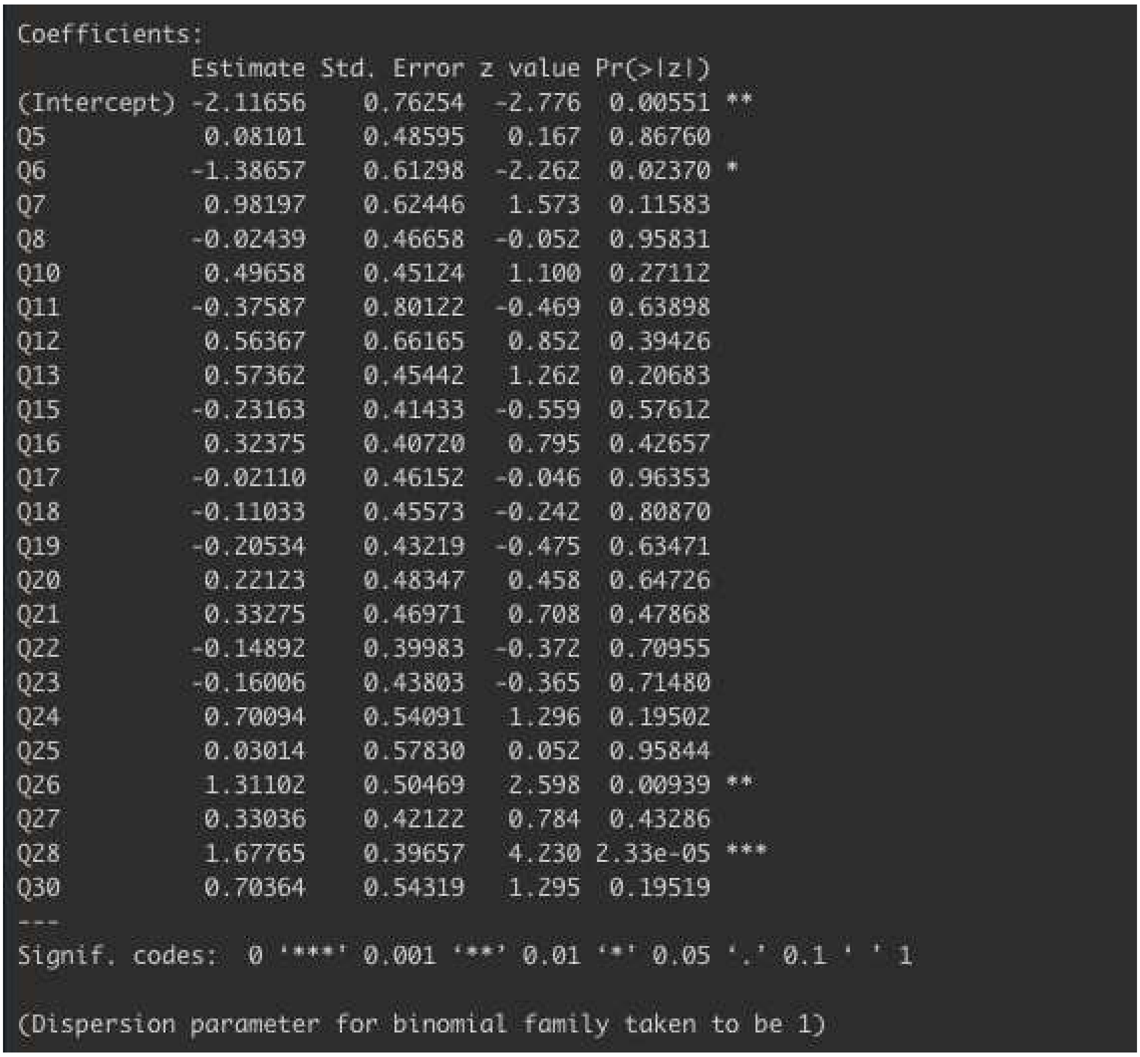
Latter the creation of the model, the variance inflation factor (VIF), In the current analysis, none of the VIF values exceed 2.4, which indicates that there is not a significant problem with multicollinearity in the model.



```
      Q5       Q6       Q7       Q8      Q10      Q11      Q12      Q13      Q15      Q16 
1.354521 2.601237 2.865566 1.624219 1.223722 1.593456 1.582058 1.359398 1.293691 1.249878 
     Q17      Q18      Q19      Q20      Q21      Q22      Q23      Q24      Q25      Q26 
1.606485 1.476909 1.253001 1.225439 1.611321 1.156094 1.414588 2.198346 1.643748 1.906375 
     Q27      Q28      Q30 
1.295740 1.186188 1.347793 
```

Figure 30 - Results of the VIF analysis

As can be seen from Figure 30, none of the VIF values exceeds 2.4, which indicates that there is no problem with multicollinearity in the regression model.



```
Coefficients:
            Estimate Std. Error z value Pr(>|z|)
(Intercept) -2.11656    0.76254  -2.776  0.00551 **
Q5           0.08101    0.48595   0.167  0.86760
Q6          -1.38657    0.61298  -2.262  0.02370 *
Q7           0.98197    0.62446   1.573  0.11583
Q8          -0.02439    0.46658  -0.052  0.95831
Q10          0.49658    0.45124   1.100  0.27112
Q11         -0.37587    0.80122  -0.469  0.63898
Q12          0.56367    0.66165   0.852  0.39426
Q13          0.57362    0.45442   1.262  0.20683
Q15         -0.23163    0.41433  -0.559  0.57612
Q16          0.32375    0.40720   0.795  0.42657
Q17         -0.02110    0.46152  -0.046  0.96353
Q18         -0.11033    0.45573  -0.242  0.80870
Q19         -0.20534    0.43219  -0.475  0.63471
Q20          0.22123    0.48347   0.458  0.64726
Q21          0.33275    0.46971   0.708  0.47868
Q22         -0.14892    0.39983  -0.372  0.70955
Q23         -0.16006    0.43803  -0.365  0.71480
Q24          0.70094    0.54091   1.296  0.19502
Q25          0.03014    0.57830   0.052  0.95844
Q26          1.31102    0.50469   2.598  0.00939 **
Q27          0.33036    0.42122   0.784  0.43286
Q28          1.67765    0.39657   4.230 2.33e-05 ***
Q30          0.70364    0.54319   1.295  0.19519
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)
```

Figure 31 – Output of from the Logistic Regression Model

When all predictor variables are zero, the intercept (-2.12) represents the log probabilities of the outcome variable being "1." The intercept's p-value is significant at 0.005, indicating that the model is significant.

Among the predictor variables, Q6 (a respondent uses social media to discover new products) has a significant negative coefficient (-1.39) with a p-value of 0.024, indicating that people who use social networks to keep abreast of new products are less likely to want to be aware of online campaigns for saving on fuel expenses, Q26 (a respondent would be willing to install the Fuel Brands' apps, if there were promoted fuel’s discounts, campaigns and coupons) has a meaningful positive coefficient (1.31) with a p-value of 0.009, indicating that people who are willing to install the social platforms of a Fuel Brand to attain the respected discounts there publicized tend to be more aware of online campaigns for saving on fuel expenses, and Q28 (a respondent would prefer a more modern advertising method for fuel price campaigns and promotions, as it would be a way to be more aware of the prices of the different brands) has a high positive coefficient (1.68) with a p-value of 0.0000233, indicating that people who want to modernize the campaign method for Fuel Brand's to raise awareness of the prices from different brands, are guaranteed to be aware of online campaigns for saving on fuel expenses.

3.5. Discussion

Results show that the influence of digital marketing when choosing a Fuel Brand has many variables of influence:

Age directly correlates with how much time an individual spends on social media and how likely they are to utilize it to learn about new products or new promotions. The younger generation of drivers, which in this case are considered between the ages of 18 to 36 years old, are more likely to spend more time on social media and utilize it for these goals. As the study shows, as the age of an individual increases, the number of times they fuel per month increases, and with social media being the undisputable preferred strategy to discover new products, promotions, or special offers, regardless of age, it is key for any brand to have a significant presence on the internet.

It can be concluded that Fuel Brands make little to no use of their social platforms since so few respondents have a digital platform application of a Fuel Brand installed and even fewer follow any on social media. "Poor usage" is the correct term to describe the presence of Fuel Brands on social platforms since, according to the literature, the top 3 brands hold special promotions and campaigns on their digital platforms, with two of them having a point-based system rewarding loyalty from the customers to their brand, meaning that the problem is not the content of the platforms, but the advertising of it.

The engagement on social platforms is justified by the average content the brand provides and advertises, as said in the literature. With such high usage of social media and digital platform application habits regarding other types of brands, the lack of advertising and exposure of a Fuel Brand's social platforms is hurting their investment. Their customers are missing exclusive opportunities, as they seem to be unaware of what is being promoted on the digital application.

Findings show that Fuel Brands that effectively optimally leverage social media platforms, could gain a competitive advantage by efficiently communicating their digital marketing campaigns. Since social platforms hold such significant importance when shaping a customer's perception of any brand. A Fuel Brand’s reputation and quality can be enhanced by improving its engagement with its customers and by spreading the company’s values.

The high correlation between the variables suggests that customers are more likely to choose a Fuel Brand that offers a promotion, or a reward for affiliation on a digital platform over other brands, even if it is slightly more expensive. The same applies to reputation and fuel quality, whereas customers may be more inclined to pay a higher price for gas if a Fuel Brand has a great reputation and positive ratings on the internet and social platforms.

Results also indicate that digital marketing can have a considerable impact on consumers' choice of Fuel Brands, suggesting that it can be an effective way to engage with their customers. To enhance their effectiveness, Fuel Brands need to customize their marketing techniques to different consumer segments. The analysis of consumer behaviour and personal preferences is crucial for understanding the decision-making process of an individual when choosing a Fuel Brand. In this sense, digital marketing can play a fundamental role by reaching out to clients via various digital platforms such as social media, digital applications, and websites. For example, respondents that are "Digitally Engaged", are already so highly engaged with social platforms and social media habits, that Fuel Brands can offer loyalty programs and special campaigns, to keep customers engaged and interested. For the ones "Slightly Engaged" however, who tend to be more price-sensitive and slightly less digitally engaged, Fuel Brands should utilize digital marketing to educate consumers on the benefits of using Fuel Brand coupons and promotions, particularly how they can result in cheaper fuel prices than some of the low-cost brands. For the “Almost Digitally Inactive”, who worry about the reputation and quality of

Fuel Brands, Digital marketing can then be used by Fuel Brands to introduce them to their mobile apps, websites, and social media platforms, while emphasizing the ease of use and great benefits that comes with their brand. Finally, towards the "Non-Digital", where there is almost no digital engagement whatsoever and are the highest price-sensitive respondents, Fuel Brands can still use digital marketing to reach out to them through traditional strategies such as email marketing and text message marketing, the offering of competitive prices. Fuel Brands can customize their digital marketing strategies to appeal to each segment of clients, enhancing engagement and loyalty, and consequently boosting their revenue through the study of customer behaviour and preferences.

Overall, digital marketing initiatives by a Fuel Brand, such as providing discounts through applications or adopting innovative advertising methods, can be effective in impacting consumer choices and establishing customer loyalty towards the brand. The outcome is that a Fuel Brand which makes an investment in digital marketing and provides special offers and campaigns only accessible through their respective social platforms are more likely to attract and retain a high percentage of customers.

Chapter 4
Conclusions

The present study was designed to determine the impact of digital marketing when a customer is choosing a Fuel Brand in Portugal.

A statistical analysis in Microsoft Excel and R was done on a sample of 249 respondents that are consumers of any type of Fuel Brand. The results of the analysis were divided into two main aspects of the conclusion. The first one is that age is a significant driver when it comes to social media habits, a younger audience is more likely to effectively be influenced by digital marketing, however, regardless of age, the majority of the sample chose social media as its preferred strategy for discovering new products and to keep up with promotions and special offers, suggesting that a brand needs to hold a strong presence on social media platforms to successfully communicate their digital marketing initiatives. This directly correlates with the lack of publicity and exposure on the perks that a Fuel Brand's social platforms can bring to a customer, as shown accordingly to the low results in the visibility variable of the analysis, meaning that enhancing online engagement with traditional customers that are already familiar with the company’s values, will result in increasing a Fuel Brand’s reputation and quality. From this, it can then be concluded that oil and gas companies that can effectively leverage their social media platforms, could gain a significant competitive advantage by efficiently communicating their digital marketing efforts. The latter aspect of the results can complement the first, whereas age isn´t the only variable that distinguishes the types of customers in the oil and gas market and, therefore, adjusting marketing techniques to different consumer niches to increase the effectiveness of digital marketing activities. To comprehend an individual's decision-making process when choosing a gas station, Fuel Brands must analyze consumer behaviour and personal preferences, and optimally adapt digital marketing strategies to appeal to each segment of customers to improve customer loyalty and participation, which can consequently attract and retain a high percentage of customers, boosting company’s revenue.

These study results have some limitations in terms of generalizability. For example, the findings obtained are restricted to the sample size chosen for this study. As a result, the study's generalizability to other types of customers, from different locations spread throughout the country is limited. Given that research on the influence of digital marketing when choosing a Fuel Brand is scant, this study is also limited by a lack of related secondary data. Despite its limitations, the research contributes to our understanding of the impact of digital marketing in the oil and gas industry, implying the need for additional research to investigate specific links between the two. Overall, it can still be concluded that to gain a competitive advantage and establish customer loyalty, digital marketing initiatives should be an integral part of any Fuel Brand's core strategy.

Bibliography

Adkins, L. and Lury, C. (2011), "Introduction: special measures", The Sociological Review, Vol. 59 No. S2, pp. 5-23

Alam, M., Abu Faiz, M., & Aftab, M. (2015). Mobile marketing: a study of buying Intention. British Journal of Economics, Management & Trade 7(3), 218-226. https://doi.org/10.9734/bjemt/2015/16336

Alsubagh, H. (2015). The impact of social network on consumers' behavior. International Journal of Business and Social Science, 6(1), 209–216.

Arora, A., Bansal, S., Kandpal, C., Aswani, R., & Dwivedi, Y. (2019). Measuring social media influencer index-insights from Facebook, Twitter, and Instagram. Journal of retailing and consumer services, 49, 86-101.

Aqsa, M., & Kartini, D. (2015). Impact of online advertising on consumer attitudes and interests buy Online. International Journal of Scientific & Technology Research, 4(4), 230-236.

Babbie, Earl R. (2010). The Practice of Social Research. 12th ed. Belmont, CA: Wadsworth Cengage.

Bansal, R., Masood, R., & Dadhich, V. (2014). Social media marketing- a tool of innovative marketing. Journal of Organizational Management, 3(1), 1-7

Barisic, B., Pepelnjak, T., & Math, M. D. (2008). Predicting of the Lüders' bands in the processing of TH material in computer environment by means of stochastic modeling. Journal of materials processing technology, 203(1-3), 154-165.

Bhandari, R. S., & Bansal, A. (2018). Impact of search engine optimization as a marketing tool. Jindal Journal of Business Research, 7(1), 23-36.

Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. Journal of computer-mediated Communication, 13(1), 210-230.

Budiman, S. (2021). The effects of social media on brand image and brand loyalty in generation y. Journal of Asian Finance, Economics and Business 8(3), 1339-1347. https://doi.org/10.13106/jafeb.2021.vol8.no3.1339

Capello, M. A., Cox, D., & Battalora, L. B. (2022, September). Social Media and the Oil & Gas Sector: Challenges and Opportunities. In SPE Annual Technical Conference and Exhibition. OnePetro.

Carmines, E. G., & Zeller, R. A. (1979). Reliability and validity assessment. Sage publications.

Carranza, R., Díaz, E., & Martín-Consuegra, D. (2018). The influence of quality on satisfaction and customer loyalty with an importance-performance map analysis: Exploring the mediating role of trust. Journal of Hospitality and Tourism Technology, 9(3), 380-396.

Cao, Y., Ajjan, H., Hong, P., & Le, T. (2018). Using social media for competitive business outcomes: An empirical study of companies in China. Journal of Advances in Management Research.

Cennamo, C. (2021). Competing in digital markets: A platform-based perspective. Academy of Management Perspectives, 35(2), 265-291.

Chaffey, D., Ellis-Chadwick, F., Mayer, R., & Johnston, K. (2009). Internet marketing: strategy, implementation, and practice. Pearson Education.

Cooke, M., & Buckley, N. (2008). Web 2.0, social networks, and the future of market research. International Journal of Market Research, 50(2), 267–292.

Cheung, C. M., & Lee, M. K. (2010). A theoretical model of intentional social action in online social networks. Decision Support System, 49(24–30), 24–30.

Chung, N., & Koo, C. (2015). The use of social media in travel information search. Telematics and Informatics, 32(2), 215–229.

Craig, J., Gerali, F., MacAulay, F., & Sorkhabi, R. (2018). The history of the European oil and gas industry (1600s–2000s). Geological Society, London, Special Publications, 465(1),1-24.

De Vries, N.J. and Carlson, J. (2014), “Examining the drivers and brand performance implications of customer engagement with brands in the social media environment”, Journal of Brand Management, Vol. 21 No. 6, pp. 495-515, available at:

www.palgravejournals.com/bm/journal/vaop/ncurrent/abs/bm201418a.html.

Dhore, A., & Godbole, S. (2019). A Descriptive Study of the Effectiveness of Internet Advertising on Consumer Buying Behavior in Nagpur City. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3341924

East, R., Wright, M., & Vanhuele, M. (2008). Consumers Behaviour: Applications in marketing. SAGE.

Faruk, M., Rahman, M., & Hasan, S. (2021). How digital marketing evolved over time: A bibliometric analysis on scopus database. Heliyon, e08603.

Forbes Business Council. (2023, January 19). How Social Media is Changing Business Strategies. Forbes. https://www.forbes.com/sites/forbesbusinesscouncil/2023/01/19/how-social-media-is-changing-business-strategies/?sh=39b928c32f5f

Howells, R. (2011), “Are you ready for the social supply chain”, Forbes, (Brand Voice), October 24, available at: www.forbes.com/sites/sap/2011/10/24/are-you-ready-for-the-social-supply-chain/ (accessed February 20, 2018).

Khan, A. R., & Islam, M. A. (2017). The Impact of Digital Marketing on Increasing Customer Loyalty: A Study on Dhaka City, Bangladesh. International Journal of Economics, Commerce and Management, 5(4), 521-528. http://ijecm.co.uk/wp-content/uploads/2017/04/5433.pdf

Kotler, P., & Armstrong, G. (2017). Principles of marketing (17th ed.). Pearson Education.

Lamberton, C., & Stephen, A. T. (2016). A thematic exploration of digital, social media, and mobile marketing: Research evolution from 2000 to 2015 and an agenda for future inquiry. Journal of marketing, 80(6), 146-172.

Lawrence, R., Melville, P. , Perlich, C. , Sindhwani, V. , Meliksetian, S. , Hsueh, P.-Y. and Liu, Y. (2010), "Social media analytics", OR-MS Today, Vol. 37 No. 1, pp. 26-30.

Lim, Y., Yap, C., & Lau. (2011). The effectiveness of online advertising in purchase decision: Liking, Recall and Click. Australian Journal of Basic and Applied Sciences, 5(9), 1517-1524.

Lodhi, S., & Shoaib., M. (2017). Impact of E-Marketing on Consumer Behaviour: A Case of Karachi, Pakistan. Journal of Business and Management, 19(1), 90-101.

Marktest. (2021, October 19.). Portugal: Portugal com mais de 2600 postos de abastecimento de combustível. Marktest. Retrieved from https://www.marktest.com/wap/a/n/id~2800.aspx.

Mohamed, S., Mustaffa, C., & Bahtiar, M. (2016). Impacts of online banner advertisement on consumers' purchase intention: A theoretical framework. Asia Pacific Journal of Education, Arts and Sciences, 3(1), 75-82. http://oaji.net/articles/2016/1710-1465285067.pdf

Muijs, D. (2010). Doing quantitative research in education with SPSS. Doing quantitative research in education with SPSS, 1-264.

Nunnaly, J. (1978). Psychometric theory. McGraw-Hill.

NUR DP, E. (2021). The impact of social media on firm value: A case study of oil and gas firms in Indonesia. The Journal of Asian Finance, Economics and Business, 8(3), 987-996.

Omar, A., & Atteya., N. (2020). The impact of digital marketing on consumer buying decision process in the Egyptian market. International Journal of Business and Management, 15(7), 120-132. https://doi.org/10.5539/ijbm.v15n7p120

Osatuyi, B. (2013). Information sharing on social media sites. Computers in Human Behavior, 29(6), 2622-2631.

Parsons, Andrew J., Michael Zeisser, and Robert Waitman. "Organizing for digital marketing." The McKinsey Quarterly 4 (1996): 185.

Poulis, A., Rizomyliotis, I., & Konstantoulaki, K. (2019). Do firms still need to be social? Firm generated content in social media. Information Technology & People, 32(2), 387–404.

Rao, N. T., & Ratnamadhuri, K. (2018). Digital marketing communication and consumer buying decision process: An empirical study in the Indian passenger bike Market. International Journal of Management, Technology and Engineering, 8(12), 3092-3107.

Reimers, V., Chao, C., & Gorman, S. (2016). Permission email marketing and its influence on online shopping. Asia Pacific Journal of Marketing and Logistics, 28(2), 308-322. https://doi.org/10.1108/APJML-03-2015-0037

Schiavi, M. T., & Hoffmann, W. A. M. (2015). Cenário petrolífero: sua evolução, principais produtores e tecnologias. RDBCI: Revista Digital de Biblioteconomia e Ciência da Informação, 13(2), 259-278.

Song YB, 2001, Proof That Online Advertising Works, Atlas Institute, Seattle, WA, Digital Marketing Insight

Statista. (2023, February 13). Number of worldwide social network users from 2027 (in billions). Statista. https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/

Tabachnick, B. G., & Fidell, L. S. (2007). Using multivariate statistics (5th ed.). Allyn & Bacon/Pearson Education.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. International Journal of Medical Education, 2(1), 53–55.

Tiffany, R., Kamala, S., & Phorkodi, M. (2018). A study on impact of digital marketing in customer purchase decision in Thoothukudi. International Journal of Science, Engineering and Management, 3(4), 613-617. https://www.technoarete.org/common_abstract/pdf/IJSEM/v5/i4/Ext_29853.pdf

Ugonna, J., Victor, O., & Jeft, O. (2017). Effects of online marketing on the behaviour of consumers in selected online companies in owerri, Imo State - Nigeria. International Journal of Business and Management Invention, 6(6), 32-43. http://www.ijbmi.org/papers/Vol(6)6/version-3/E0606033243.pdf

Whiting, A., & Williams, D. (2013). Why people use social media: a uses and gratifications approach. Qualitative market research: an international jornal

Yannopoulos, Peter. "Impact of the Internet on marketing strategy formulation." International Journal of Business and Social Science 2.18 (2011).

Yasmin, A., Tasneem, S., & Fatema, K. (2015). Effectiveness of digital marketing in the challenging age: An empirical study. International Journal of Management Science and Business Administration, 1(5), 69–80.

Yates, D., & Paquette, S. (2011). Emergency knowledge management and social media technologies: A case study of the 2010 Haitian earthquake. International journal of information management, 31(1), 6-13.

Yusuf, Y. Y., Gunasekaran, A., Musa, A., Dauda, M., El-Berishy, N. M., & Cang, S. (2014). A relational study of supply chain agility, competitiveness and business performance in the oil and gas industry. International Journal of Production Economics, 147, 531-543.

Zhu, K., Kraemer, K.L. and Dedrick, J. (2004), “Information technology payoff in e-business environments: an international perspective on value creation of e-business in the financial services industry”, Journal of Management Information Systems, Vol. 21 No. 1, pp. 17-54.

Zhu, K., Kraemer, K.L. and Xu, S. (2006), “The process of innovation assimilation by firms in different countries: a technology diffusion perspective on e-business”, Management Science, Vol. 52 No. 10, pp. 1557-1576.

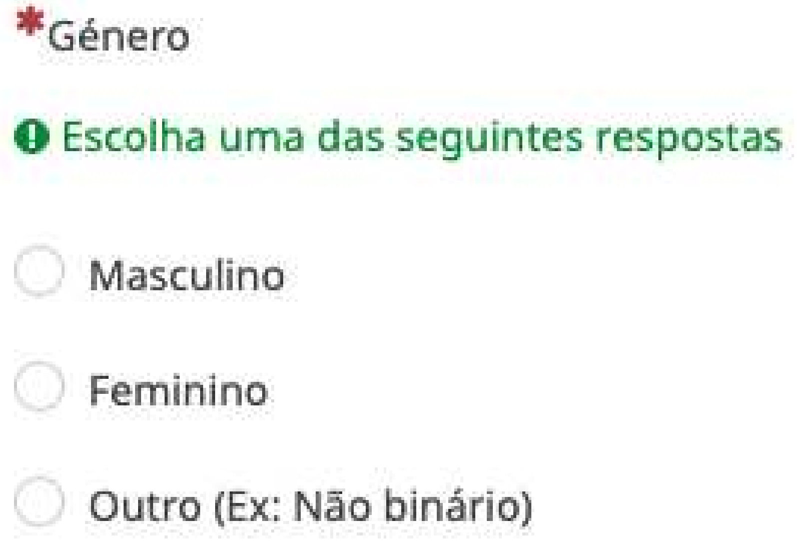
Appendix

Appendix 1 – Questionnaire

O seguinte questionário foi realizado no âmbito da dissertação de mestrado em Gestão na Católica Porto Business School- "The influence of digital marketing in choosing a Fuel Brand in Portugal". Com ele pretendo analisar a influência do marketing digital na escolha do consumidor português na seleção de uma estação de serviço para abastecimento de combustível.

O questionário tem a duração de cerca de 5-6 minutos. Os dados estatísticos recolhidos serão exclusivamente utilizados para fins académicos. Ao preencher o questionário, concorda na utilização desta informação, apenas e em exclusivo, para o propósito da dissertação.

Grupo 1: Perguntas Introdutórias



*Género

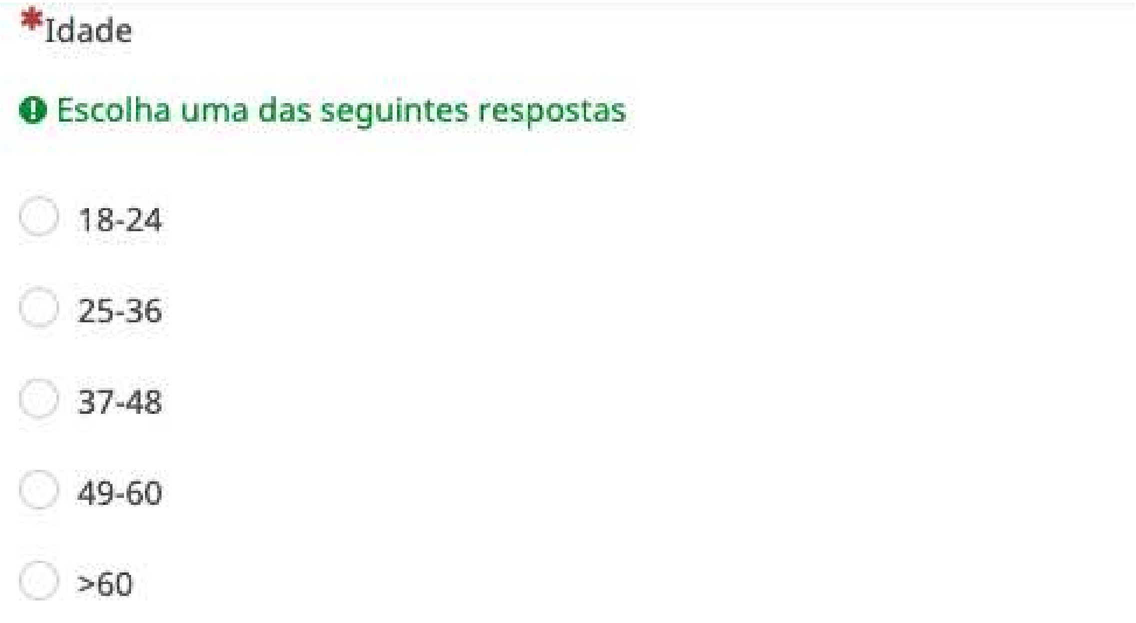
Escolha uma das seguintes respostas

○ Masculino

○ Feminino

○ Outro (Ex: Não binário)

Figure 32 - Question 1 from the questionnaire



*Idade

Escolha uma das seguintes respostas

○ 18-24

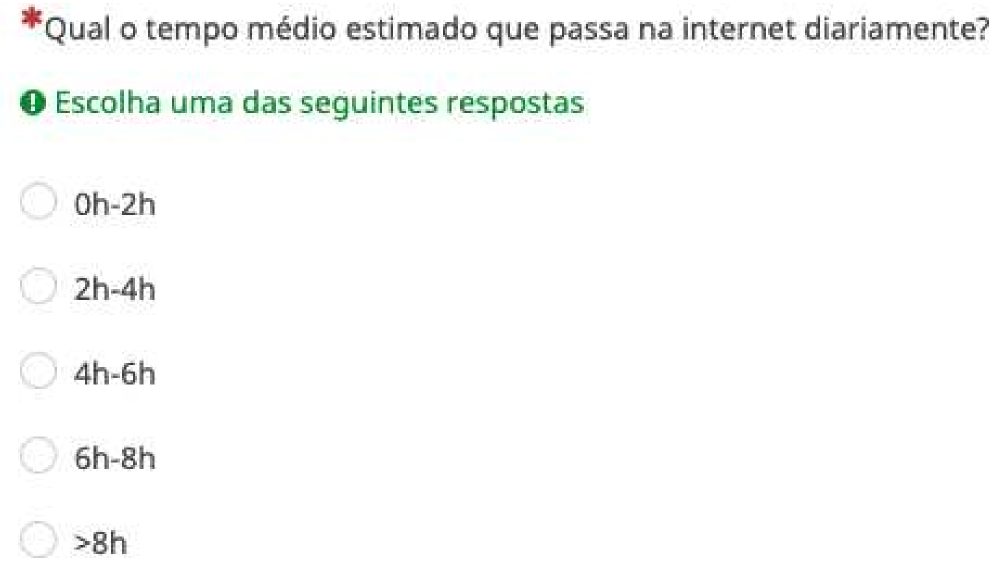
○ 25-36

○ 37-48

○ 49-60

○ >60

Figure 33 - Question 2 from the questionnaire



*Qual o tempo médio estimado que passa na internet diariamente?

Escolha uma das seguintes respostas

○ 0h-2h

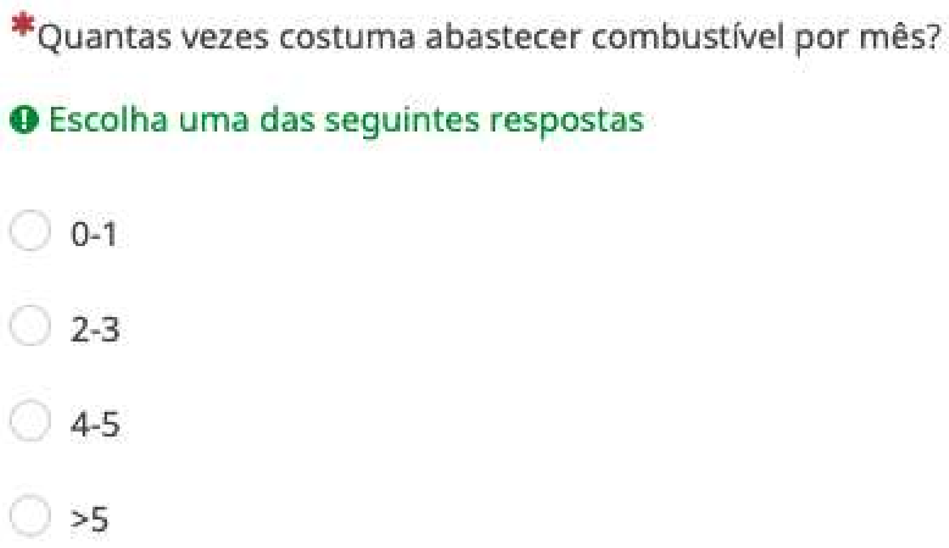
○ 2h-4h

○ 4h-6h

○ 6h-8h

○ >8h

Figure 34 - Question 3 from the questionnaire



*Quantas vezes costuma abastecer combustível por mês?

Escolha uma das seguintes respostas

○ 0-1

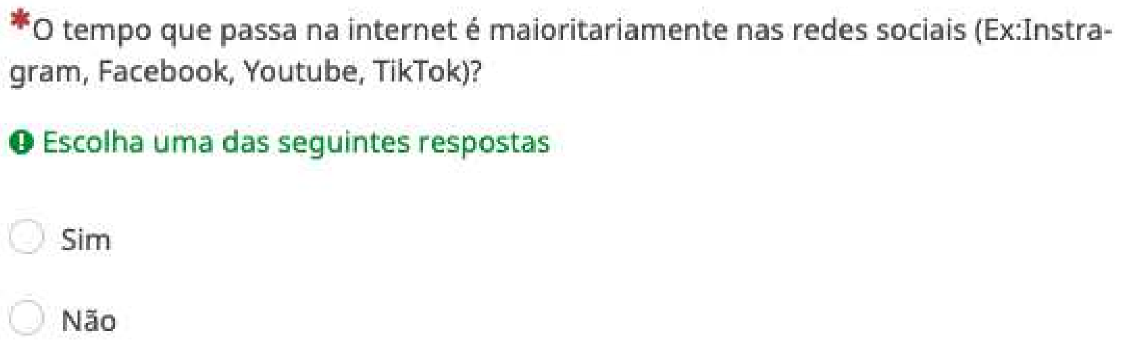
○ 2-3

○ 4-5

○ >5

Figure 35 - Question 4 from the questionnaire

Grupo 2: Redes Sociais e Plataformas Digitais - Este grupo é constituído por perguntas de "Sim" ou "Não", em prol de compreender os comportamentos do consumidor nas redes sociais adaptado ao tema em questão



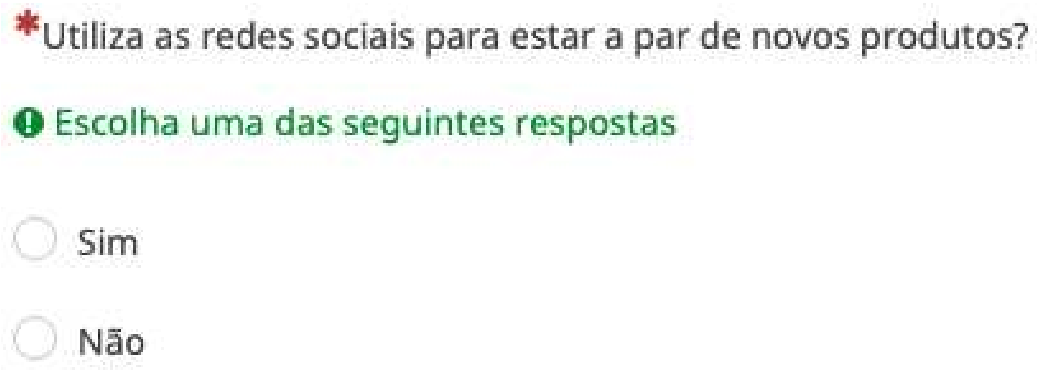
*O tempo que passa na internet é maioritariamente nas redes sociais (Ex:Instragram, Facebook, Youtube, TikTok)?

Escolha uma das seguintes respostas

○ Sim

○ Não

Figure 36 - Question 5 from the questionnaire

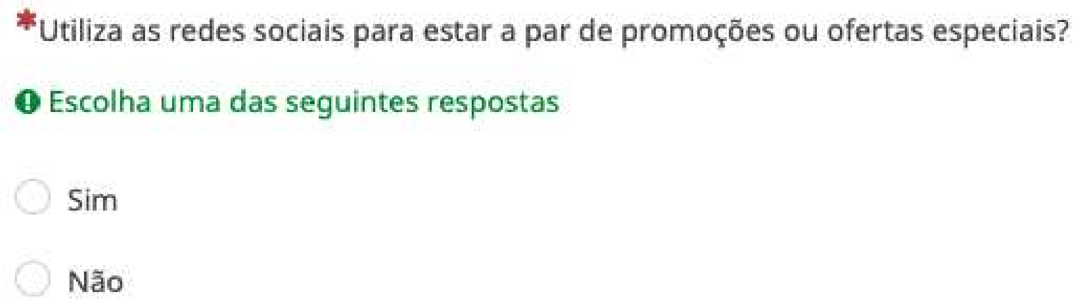

*Utiliza as redes sociais para estar a par de novos produtos?

Escolha uma das seguintes respostas

○ Sim

○ Não

Figure 37 - Question 6 from the questionnaire

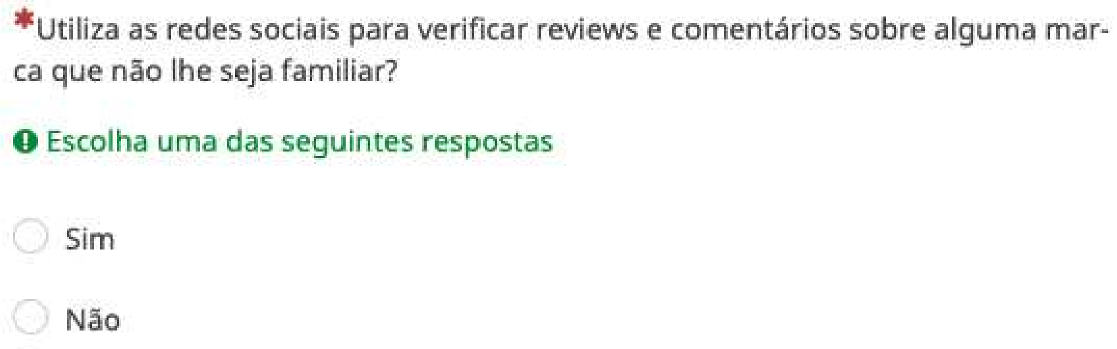

*Utiliza as redes sociais para estar a par de promoções ou ofertas especiais?

Escolha uma das seguintes respostas

○ Sim

○ Não

Figure 38 - Question 7 from the questionnaire

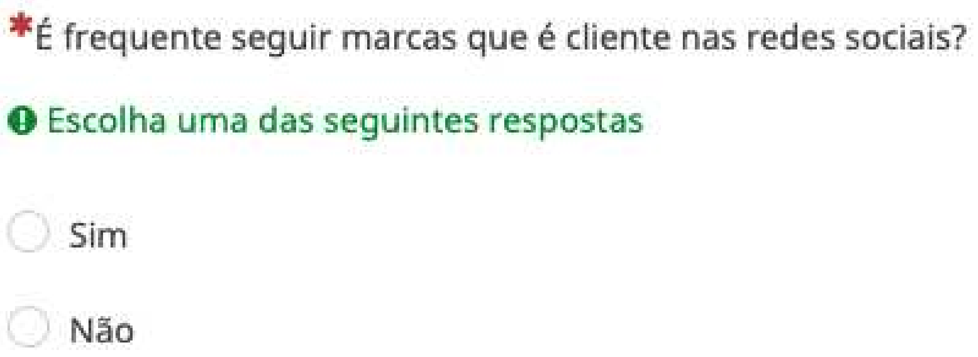

*Utiliza as redes sociais para verificar reviews e comentários sobre alguma marca que não lhe seja familiar?

Escolha uma das seguintes respostas

○ Sim

○ Não

Figure 39 - Question 8 from the questionnaire



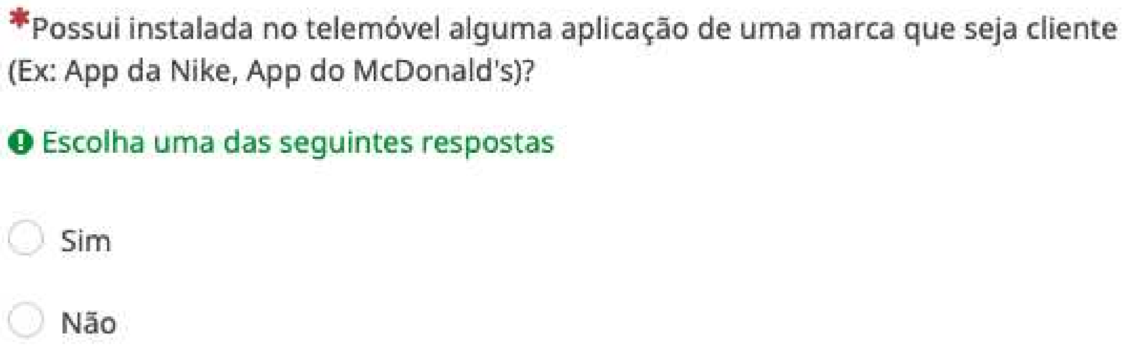
*É frequente seguir marcas que é cliente nas redes sociais?

Escolha uma das seguintes respostas

○ Sim

○ Não

Figure 40 - Question 9 from the questionnaire



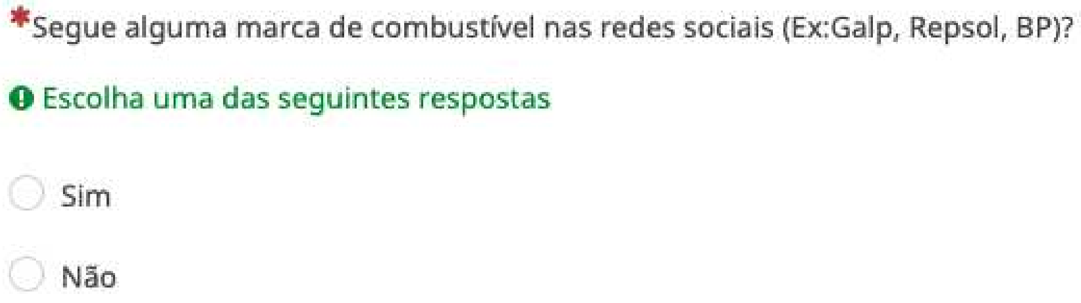
*Possui instalada no telemóvel alguma aplicação de uma marca que seja cliente (Ex: App da Nike, App do McDonald's)?

Escolha uma das seguintes respostas

○ Sim

○ Não

Figure 41 - Question 10 from the questionnaire



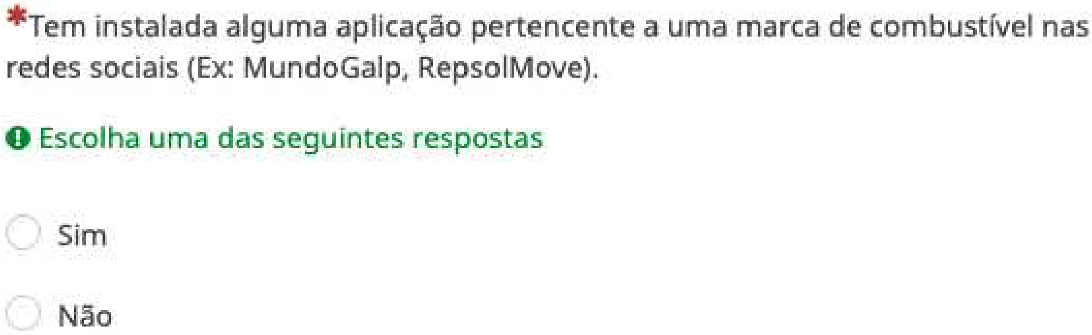
*Segue alguma marca de combustível nas redes sociais (Ex:Galp, Repsol, BP)?

Escolha uma das seguintes respostas

○ Sim

○ Não

Figure 42 - Question 11 from the questionnaire



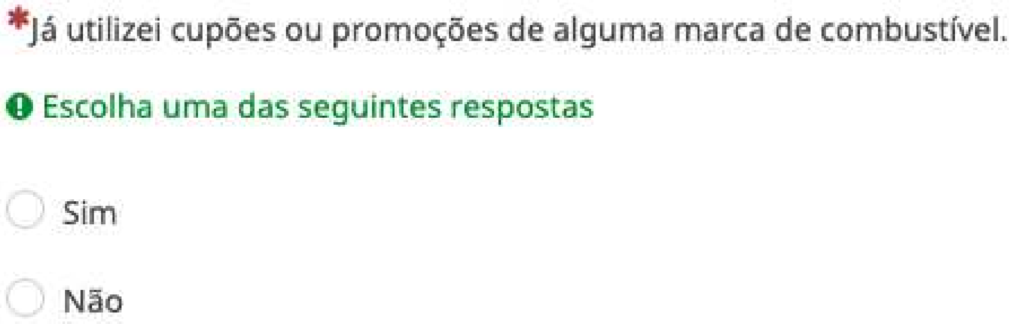
*Tem instalada alguma aplicação pertencente a uma marca de combustível nas redes sociais (Ex: MundoGalp, RepsolMove).

Escolha uma das seguintes respostas

○ Sim

○ Não

Figure 43 - Question 12 from the questionnaire



*Já utilizei cupões ou promoções de alguma marca de combustível.

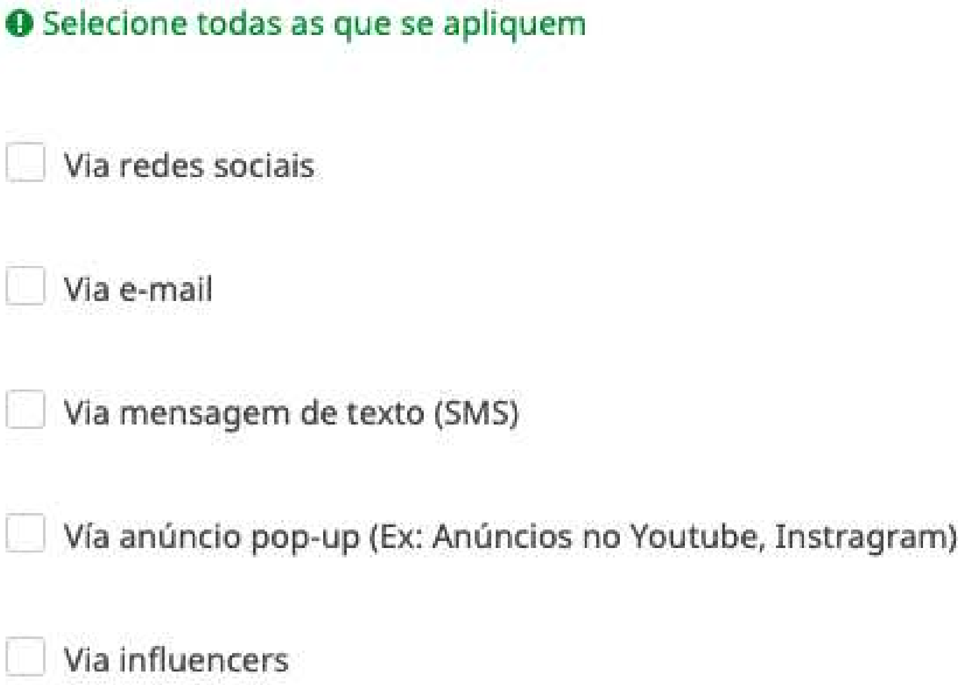
Escolha uma das seguintes respostas

○ Sim

○ Não

Figure 44 - Question 13 from the questionnaire

Grupo 3: Estratégias de Marketing Digital - Das estratégias de marketing digital referidas em baixo, escolha as opções mais frequentes onde costume descobrir novas campanhas, descontos ou promoções:



Selecione todas as que se apliquem

☐ Via redes sociais

☐ Via e-mail

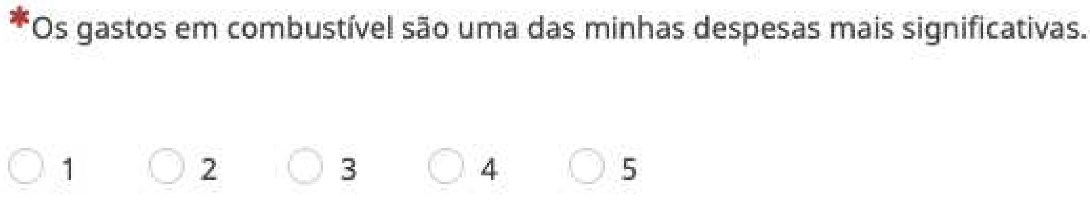
☐ Via mensagem de texto (SMS)

☐ Vía anúncio pop-up (Ex: Anúncios no Youtube, Instragram)

☐ Via influencers

Figure 45 - Question 14 from the questionnaire

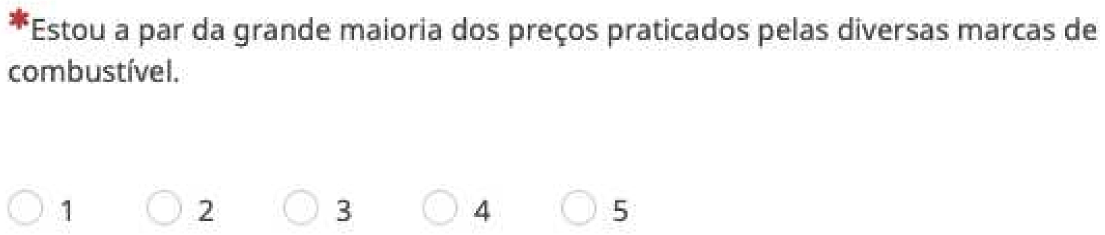
Grupo 4: Opiniões Gerais do Consumidor Português - Os últimos 2 grupos do questionário serão questões de escala que varia entre (1) - Discordo Totalmente a (5) Concordo Totalmente, o (3) significando "Não Concordo nem Discordo".



*Os gastos em combustível são uma das minhas despesas mais significativas.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

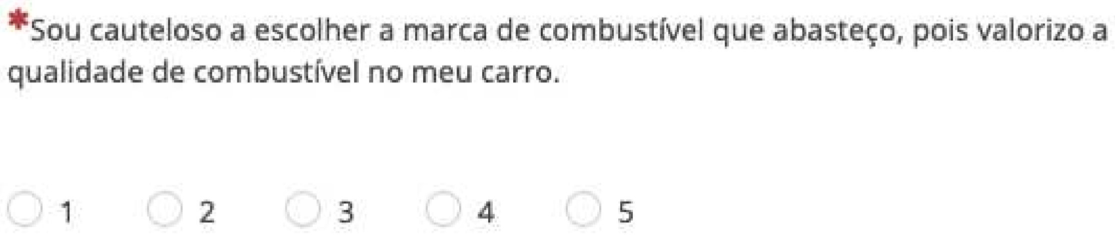
Figure 46 - Question 15 from the questionnaire



*Estou a par da grande maioria dos preços praticados pelas diversas marcas de combustível.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

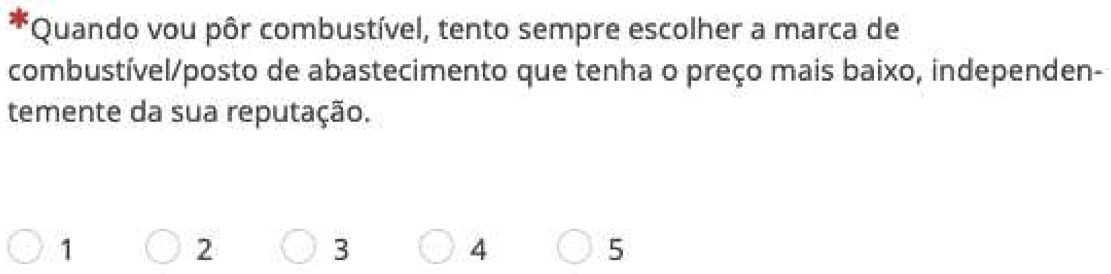
Figure 47 - Question 16 from the questionnaire



*Sou cauteloso a escolher a marca de combustível que abasteço, pois valorizo a qualidade de combustível no meu carro.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

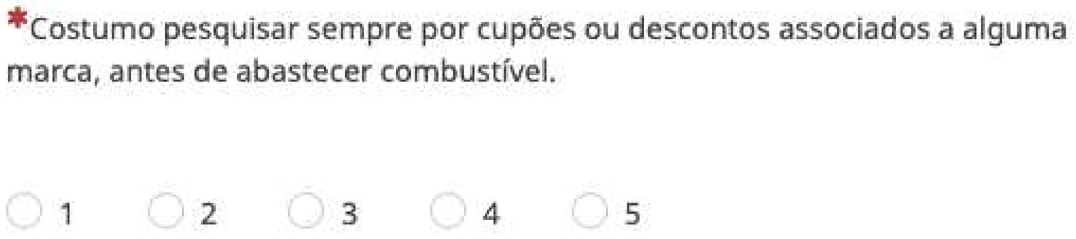
Figure 48 - Question 17 from the questionnaire



*Quando vou pôr combustível, tento sempre escolher a marca de combustível/posto de abastecimento que tenha o preço mais baixo, independentemente da sua reputação.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

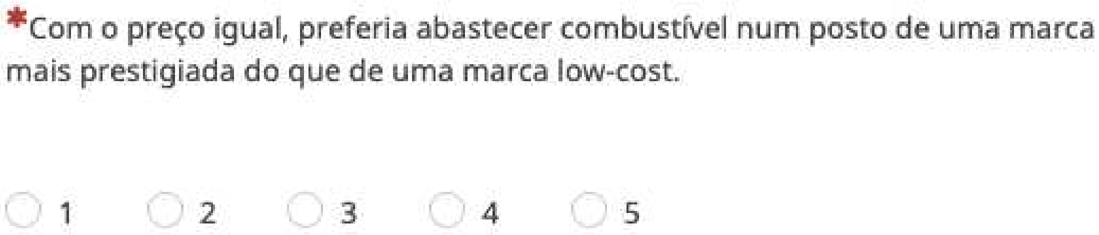
Figure 49 - Question 18 from the questionnaire



*Costumo pesquisar sempre por cupões ou descontos associados a alguma marca, antes de abastecer combustível.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

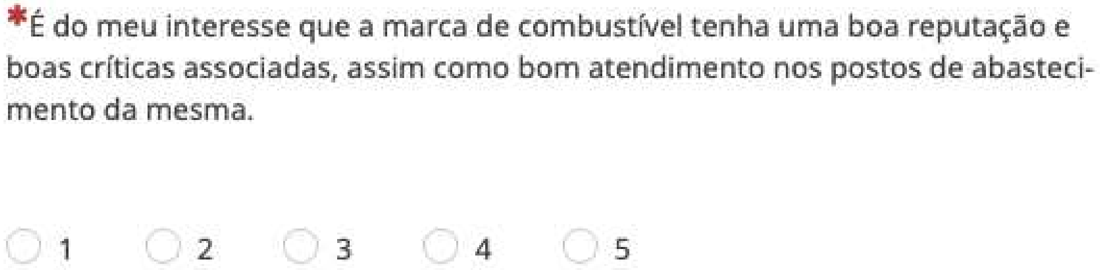
Figure 50 - Question 19 from the questionnaire



*Com o preço igual, preferia abastecer combustível num posto de uma marca mais prestigiada do que de uma marca low-cost.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

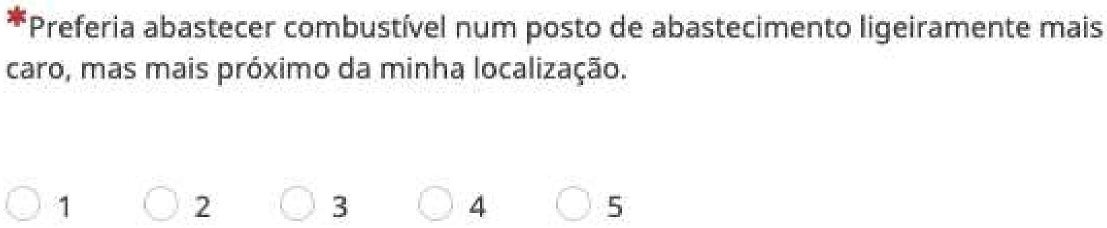
Figure 51 - Question 20 from the questionnaire



*É do meu interesse que a marca de combustível tenha uma boa reputação e boas críticas associadas, assim como bom atendimento nos postos de abastecimento da mesma.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

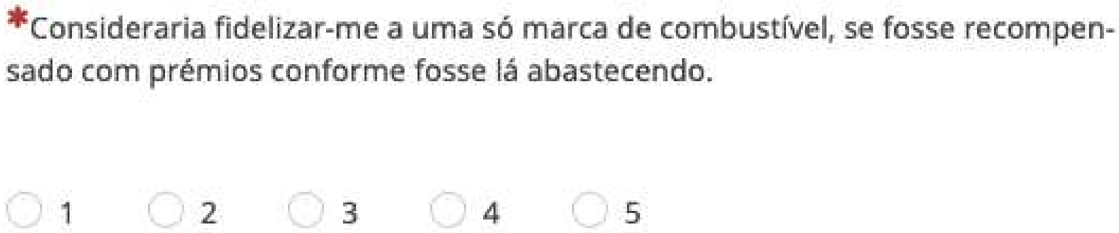
Figure 52 - Question 21 from the questionnaire



*Preferia abastecer combustível num posto de abastecimento ligeiramente mais caro, mas mais próximo da minha localização.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Figure 53 - Question 22 from the questionnaire

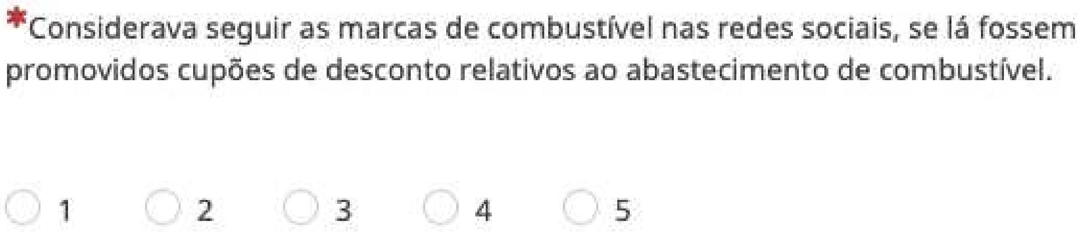


*Consideraria fidelizar-me a uma só marca de combustível, se fosse recompensado com prémios conforme fosse lá abastecendo.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

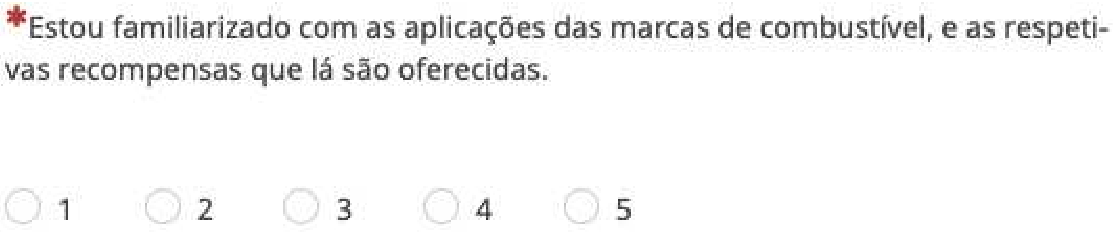
Figure 54 - Question 23 from the questionnaire

Grupo 5: Influência do Marketing Digital - Escala igual à utilizada no grupo anterior.


*Considerava seguir as marcas de combustível nas redes sociais, se lá fossem promovidos cupões de desconto relativos ao abastecimento de combustível.

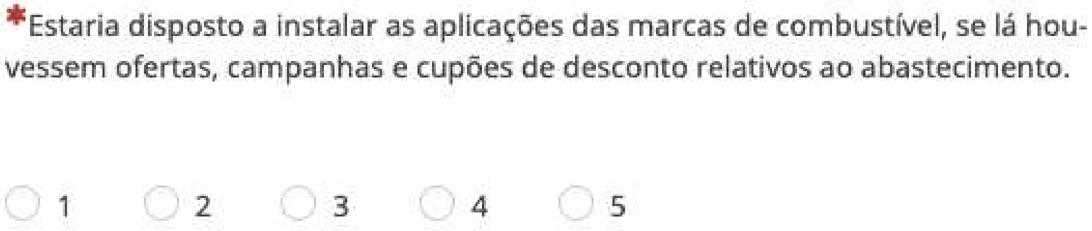
○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Figure 55 - Question 24 from the questionnaire


*Estou familiarizado com as aplicações das marcas de combustível, e as respetivas recompensas que lá são oferecidas.

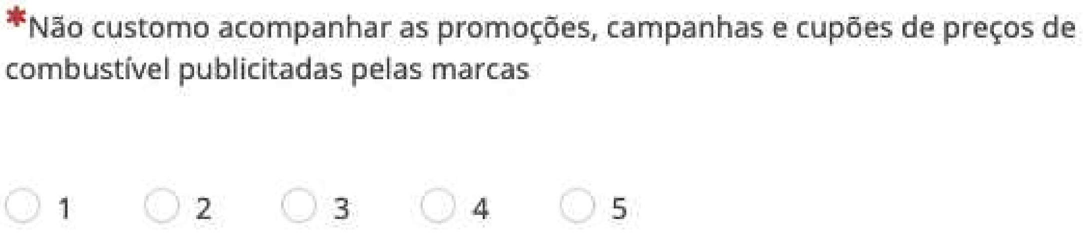
○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Figure 56 - Question 25 from the questionnaire


*Estaria disposto a instalar as aplicações das marcas de combustível, se lá houvessem ofertas, campanhas e cupões de desconto relativos ao abastecimento.

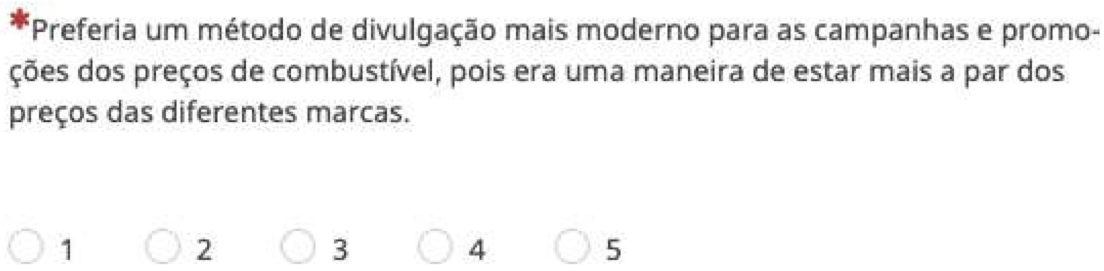
○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Figure 57 - Question 26 from the questionnaire


*Não customo acompanhar as promoções, campanhas e cupões de preços de combustível publicitadas pelas marcas

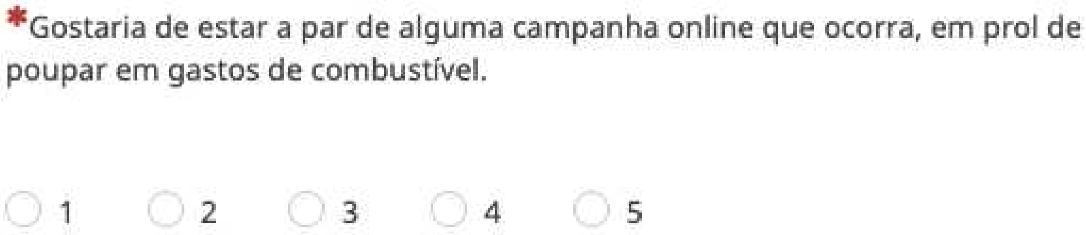
○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Figure 58 - Question 27 from the questionnaire


*Preferia um método de divulgação mais moderno para as campanhas e promoções dos preços de combustível, pois era uma maneira de estar mais a par dos preços das diferentes marcas.

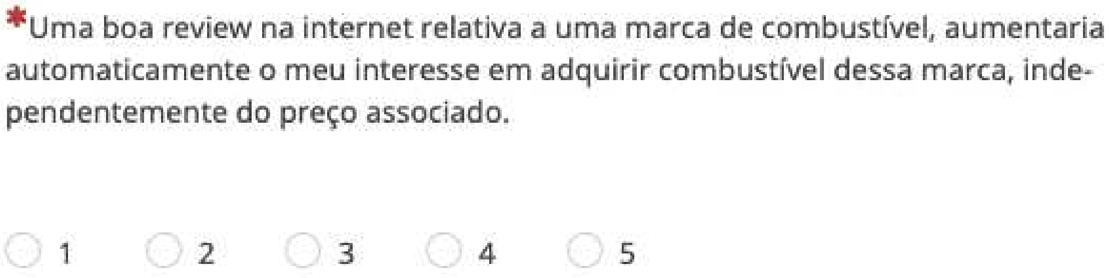
○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Figure 59 - Question 28 from the questionnaire


*Gostaria de estar a par de alguma campanha online que ocorra, em prol de poupar em gastos de combustível.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Figure 60 - Question 29 from the questionnaire


*Uma boa review na internet relativa a uma marca de combustível, aumentaria automaticamente o meu interesse em adquirir combustível dessa marca, independentemente do preço associado.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Figure 61 - Question 30 from the questionnaire