

REDUNIQ Insights 2.0

Market Analysis of Sectorial Infograpichs

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Abstract in English

Given the increasing amount of data that is entangled in modern society, several companies have realized the power of information and have started to perform data analysis. The ability to extract insights and value from data has become a critical competitive advantage for businesses and can significantly alter existing value propositions. REDUNIQ Insights is a recently developed division of REDUNIQ that is just beginning to operate in the field of data monetization. The products offered by the division presently have a significantly low number of subscribers relative to REDUNIQ's client base. This paper reflects consulting project carried out for REDUNIQ Insights and strives to understand the reasons behind the low level of subscribers of Sectorial Infographics as well as to identify a specific segment that should be primarily target. Although the research was severely affected by the limited sample size available, it can be regarded as a valid exploratory study capable of providing general insights on the REDUNIQ client base, as well as suggestions for product improvement. Overall, what emerged from the study is that the service seems to be perceived more as a "nice to have" than a valuable service for the B2B market, and the key-factor that seems determine the really low likelihood to purchase is the mismatch between the perceived value and the current price. Moreover, the low level of REDUNIQ Insights' salience among REDUNIQ's clients as well as the services provided by SIBS analytics constitute two primary threats to the success of the product.

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Resumo:

Dada a crescente quantidade de dados na sociedade moderna, várias empresas aperceberam-se do poder da informação e começaram a efetuar análises de dados. A capacidade de extrair informações e valor dos dados tornou-se uma vantagem competitiva fundamental para as empresas e pode alterar significativamente as propostas de valor existentes. A REDUNIQ Insights é uma divisão recentemente desenvolvida pela REDUNIQ que está a começar a operar no domínio da monetização de dados. Os produtos oferecidos por esta divisão têm atualmente um número significativamente baixo de subscritores em relação à base de clientes da REDUNIQ. Este artigo reflecte o projeto de consultoria realizado para a REDUNIQ Insights e procura compreender as razões por detrás do baixo nível de subscritores das Infografias Sectoriais, bem como identificar um segmento específico que deva ser prioritariamente visado. Embora a investigação tenha sido gravemente afetada pela dimensão limitada da amostra disponível, pode ser considerada como um estudo exploratório válido, capaz de fornecer informações gerais sobre a base de clientes da REDUNIQ, bem como sugestões de melhoria. O estudo revelou que o serviço parece ser visto mais como um serviço "agradável de ter" do que como um serviço valioso para o mercado B2B e que o fator-chave que parece determinar a probabilidade de compra realmente baixa é a discrepância entre o valor percebido e preço atual. Para além disso, o baixo nível de salience do REDUNIQ Insights entre os clientes da REDUNIQ, bem como os serviços prestados pela SIBS analytics constituem duas ameaças principais ao êxito do produto.

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Palavras-chave: Consultoria, Monetização de dados, Transacções, B2B, Análise de mercado, Novo produto, Preços baseados no valor, Processo de criação de valor, Probabilidade de compra, Segmentação, Envolvimento.

List of Abbreviations:

- B2B Business to Business
- B2C Business to Consumer
- PSF Professional Services Sector
- CSZ Consideration Set Size
- WTP Willingness to Pay
- EBITDA Earnings Before Interest Taxes Depreciation and Amortization
- RI REDUNIQ Insights

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1. Introduction

"It is estimated that humanity accumulated 180 EB of data between the invention of writing and 2006. Between 2006 and 2011, the total grew ten times and reached 1,600 EB. This figure is now expected to grow fourfold approximately every 3 years" (Floridi, 2012).

Given the increasing amount of data that is entangled in modern society, several companies have realized the power of information and have applied various analysis methods to extract and monetize it with new technologies. In fact, the ability to extract insights and value from data has become a critical competitive advantage for businesses across all industries.

Web 2.0 technologies have brought to fruition a fundamental techno-historical transformation that has completely altered society's attitude toward data. According to Shoshana Zuboff (2019), a professor at Harvard University, the development of Web 2.0 technologies led to the rise of a completely new form of economy, coined "surveillance capitalism"; a business model that relies on the accumulation, storage, and analysis of data. In the same book, she claims that Google had a fundamental role in the generation of this new type of economy, as they discovered a new way of creating value: extracting the "behavioral surplus".

Behavioral surplus is a term that refers to the additional value or benefit that individuals or companies can capitalize on from the data generated by people's actions and behaviors. In other words, it is the excess value that is created through the means of employing predictive analytics, highlighting behavioral patterns, estimating future behaviors, and/or interpreting users' needs based on a particular consumer function or transaction.

The realization of the power that data holds in the possibility to predict the purchasing behavior of a firm's clients led to a fundamental transformation in the business landscape; as mathematician Clive Humby¹ boldly stated, "data is the new oil". Consequently, many firms have implemented data analytics and data monetization strategies in their business model in order to maximize revenue by extracting financial value from data assets.

Although, as Zuboff claims, many companies have practiced unethical strategies that capitalize on unknowing individuals' personal information and an unregulated expropriation of data rises privacy concerns; it is undeniable that if data monetization is implemented according to noninvasive frameworks, it can represent a great resource for both companies and customers.

It is in this context that REDUNIQ, a brand owned by UNICRE, is now setting out to monetize the information collected through credit card transactions that are processed on their payment acceptance services by launching a new division: REDUNIQ Insights.

¹ British mathematician and entrepreneur in the field of data science and customer-centric business strategies.

1.1. Company Overview

UNICRE is a financial institution that has specialized in payment and credit solutions since 1974. The company operates in the Portuguese market through two brands: UNIBANCO and REDUNIQ that operate in 3 major areas: (1) The issuing and management of credit cards & personal loans, (2) The provision of card management services to institutions, within the realm of payment-card transactions, (3) Purveying services associated with acceptance of payments using cards, particularly acquiring services in respect of international brand cards.

REDUNIQ is the brand through which the company provides payment acceptance solutions, both online and for physical stores; they are a market leader in Portugal. According to UNICRE internal report, as the largest acquirer in Portugal, they are responsible for 600 million transactions amounting to 20.4 billion euros in 2021 alone.

The REDUNIQ brand possesses 65 percent of the market share in international brand transactions with an established network of more than 72k merchants and provides services to more than 132k points of sale (restaurants, supermarkets, etc.)². In 2020 REDUNIQ decided to pursue the monetization of the data collected from their transactions and launched REDUNIQ Insights. REDUNIQ Insights provides analytical information to their clients based on national retail data that aims to support the companies in generating insights to assist in making business development decisions.

The current portfolio of services offered by REDUNIQ insight is comprised of four main parts: (1) Free Monthly Infographics, (2) Free Report, (3) Monthly Sectorial Infographics, and (4) Customized Reports. The first category is a complimentary service, available to every user by accessing the company's web page, that consists of general information about the transaction process and behavior or consumption. This includes total sales, number of transactions, and average transaction value divided by geographic region. Free Report consist of analyses carried out on the most relevant moments of consumption at national level and consultable for free. The following two services are available via subscription. The monthly sectorial infographics are available for 4.99 euros per month and contain industry-specific data as well as offer a year-on-year comparison of sector performance within the market (REDUNIQ, 2023). The purpose behind this service is to provide their customers with information specific to their own industry as well as aid in generating demand for Customized Reports. These reports are created to suit the needs of the company; they offer more in-depth monitoring of the business; as they are completely customizable, the price of this varies by the company's needs. Some examples of

² Internal dataset updated to 6th May 2023

this service include, but are not limited to, a comparative performance with the competition, a consumption profile, and the degree of retention of customers³.

1.2. Problem statement

As previously mentioned, REDUNIQ Insights is a recently developed division that is just beginning to operate in the field of data monetization. As a result, the products offered by this division presently have a significantly low number of subscribers relative to REDUNIQ's substantial market share; in particular, only 3 out of 65,559⁴ REDUNIQ clients currently subscribe to the monthly sectorial Infographics. This thesis strives to understand if the low level of subscriptions currently observed is due to a lack of awareness of the services, perceived low quality of the information by their clients, or a mismatch between the price currently offered and the perceived price. In other words, this paper strives to identify whether REDUNIQ Insights needs to restructure and intensify their marketing/communication strategies, act on the price, or review the product itself. Specifically, the following questions will be assessed:

- (1) Are REDUNIQ clients aware of the new division and the services it offers? What is a 95% confidence interval of REDUNIQ Insights' awareness among REDUNIQ client base? What was the most effective communication channel to rise REDUNIQ Insights awareness?
- (2) Do firms consider the information provided by Sectoral Infographics as useful and clear?
- (3) What are the psychographics⁵ and characteristics of REDUNIQ's client base?
- (4) What are the perceived value and likelihood to purchase of Sectoral Infographics? What changes could increase Sectorial Infographics' likelihood to purchase?
- (5) Which sectors/segments are more interested in the service?

In addition to answering the questions previously listed, the activities implemented in the project were aimed at increasing the salience of REDUNIQ insights and moving survey's participants through the marketing funnel, leading prospects to action. Moreover, the hoped-for effect was to engage clients by involving them in the value creation process.

³ Source: Internal reports and REDUNIQ website.

⁴ Data provided by the company. Updated to April 2023.

⁵ Information about attitudes, opinions.

2. Literature Review

2.1. Digitization

The emergence of digital technologies has revolutionized how business-to-business firms interact in the market in terms of what they sell, how they sell it, and what new requirements they must yield to in the new landscape. To thrive in the era of digital transformation, Batsakis et al. (2019) suggest that firms must find ways to innovate with these technologies by developing "strategies that embrace the implications of digital transformation and drive better operational performance".

Although the application of data in business-to-business marketing is not a new phenomenon, the digitization and digitalization of business-to-business firms' business models have recently attracted a great deal of attention due to digital transformations, as highlighted by Ritter and Pederson (2019). The authors differentiate digitization from digitalization and conclude that, in the context of business-to-business issues, digitalization refers to the application of digital technologies that drive changes in business-to-business firms and business markets engendered by digitization. This application harbors the potential to alter value creation paths in many ways; through a review of 282 works, Vial (2019) identifies changes in value propositions as a predominant new pathway to generate value creation and to unlock the transformative potential of digital technologies. Particularly, these digital technologies give way to creating new value propositions that rely increasingly on providing services (Barrett et al., 2015). An example of this concept is when a firm provides a (generally capital-intensive) good or service to their client and employs digital technologies in this process that foster the generation of data. Using analytics, firms can offer services that monetize this data by selling to their existing customers or third parties. Overall, the literature underscores the potential for digital technologies to produce disruptive innovations that can significantly alter existing value propositions (Huang et al., 2017).

2.2. Launching a New Product

The product launch is often the most crucial stage in the new product process; empirical studies have consistently shown that a proficient product launch significantly increases the likelihood of a new product's success and that even a superior product could fail due to poor launch strategies (Cui et al., 2011). However, the launching of a new product is highly risky due to such elevated levels of market uncertainty (Langerak et al., 2004). Most often firms utilize forecasts based on historic market data and/or past experiences to formulate launch strategies; despite them frequently failing to accurately capture the real market conditions, which are only

made clear after the initial launch, especially for innovative services/products (Hitsch, 2006). Hence, any product launch strategies formulated prior to the launch, if not reviewed, are likely to be ineffective under actual market conditions. In fact, market uncertainty at the product launch stage is a primary reason for product launch failures. (Langerak et al., 2004). To resolve this predicament and better manage market uncertainty, launch strategies must be adjusted according to actual market conditions after a new product is first launched (Cui et al., 2011).

A new product's performance is reflected by the achievements of the new product in the market since the launch, relative to the firm's stated objectives (Atuahene-Gima, 1995; Ingenbleek et al., 2003). There is strong evidence both in the literature and in empirical studies that a market-oriented culture enhances the creation of superior value for customers. Furthermore, market orientation is positively correlated with product advantage, and findings support that product advantage had a significant relationship with the success of new products, namely new product performance; therefore, a market-oriented culture enhances the creation of products that perform better in the market (Langerak et al., 2004).

When launching a new product/service that impacts the business model of the firm and the way the company monetizes, it is important to have in mind that, as stated in the Harvard Business Review (2002), "business modeling is the managerial equivalent of the scientific method—you start with a hypothesis, which you then test in action and revise when necessary." Once the actual market situation is known, the next step is to develop strategies and adjust them to these conditions. In the B2B market, customers tend to be rational, risk-averse, and value-focused (O'Cass & Ngo 2012). For this reason, a new product's performance in a B2B market is determined by the firm's ability to meet the needs of its customers and affirm the product's strength (Anderson et al., 2006; Guo et al., 2018). According to Anderson et al. (2006), bestpractice suppliers base their value proposition on the elements that matter the most to their target clients and demonstrate an understanding of the customers' business priorities. Managers should consider not only the benefits and the favorable points of difference of their product but also the "resonating focus" when defining their value proposition. The resonating focus is defined as the one or two points of difference and/or points of parity that would deliver the greatest value to the client and requires customer value research (Anderson et al., 2006). Businesses must be able to successfully communicate the value of the products/services provided and price them accordingly, as pricing is indeed value capturing (Nagle & Müller, 2018).

2.2.1. Brand

Another significant factor that contributes to a successful launch of a new product in the B2B market is a firm's brand. Brands serve the same general purpose in business-to-business markets as they do in consumer markets: They facilitate the identification of products, services, and businesses as well as differentiate them from the competition. They are effective and compelling means to communicate the benefits and value a product or service can provide (Kotler & Pförtsch, 2006).

The traditional perception that branding primarily appeals to emotions engendered many marketers to believe the notion that branding is inconsequential in business markets; since organizational decision-making was perceived as a strictly rational process (Otoo et al., 2022). Conversely, recent studies show that, just as in B2C markets, brands in B2B markets build both affective and cognitive ties with customers to foster trust (Elsäßer & Wirtz, 2017). While many parallels exist between consumer and B2B relationships with brands there are distinct contrasts as well. For instance, unlike in individual markets, purchasing in B2B markets is usually involves much more complex and technical processes undertaken by group-dynamic decision making; therefore, the most important brand functions in B2B are: (1) increase information efficiency (2) risk reduction, and (3) value-added benefit creation (Kotler & Pförtsch, 2006).

2.2.2. Free Trials

As previously stated, uncertainty in the market is a primary contributor to product launch failures (Langerak et al., 2004). While this holds true for a firm's uncertainty about their product's position in the market, it also applies to a customers' uncertainty about the quality of a new product. Niu et al. (2019) noted that when a firm launches a new product, most customers will not purchase because of their uncertainty about the quality unless they are convinced that the quality is high; customers typically hold prior beliefs about the product that are usually less than the product's true value, due to customer's distrust. Although this study is conducted in a B2C market, it can be argued that this finding is even stronger in a B2B market since purchasers in B2B markets prioritize risk reduction and value-added creation (Kotler & Pförtsch, 2006). When a customer's previous perception of a new product's quality is low, the firm can offer a free trial to attract customers to try the product and resolve their uncertainty, potentially driving up the product's price in the future (Niu et al., 2019).

A free trial investment may be more likely to persuade buyers in a B2B market than simply advertising. Nevertheless, while a free trial can help the firm increase their products price and gain higher profits in the long term, it could also lead to a demand loss if some customers would have purchased the product without the free trial (Niu et al., 2019). Additionally, the presence of competition in the market significantly affects firms' operating decisions (Choi et al., 2018). Therefore, it is essential to evaluate the impact of competition on a firm's free trial decision, as the implementation of this strategy could prompt competitors to lower their prices and trigger a price war that could harm the firm (Niu et al., 2019).

2.3. Pricing

Pricing denotes the monetary value assigned to a product or service in exchange for its consumption and is a fundamental concept in economics, marketing, and business management. Since pricing is the element of the marketing mix that is directly related to revenues, marketing scholars and practitioners have frequently highlighted its importance (Indounas, 2019; Ingenbleek & van der Lans, 2013; Monroe, 2003; Zimmerman & Blythe, 2018). Researchers of industrial marketing stress the importance of pricing for a firm's survival and profitability (Töytäri et al., 2015; Ingenbleek & van der Lans, 2013). Pricing is one of the most powerful value-creation levers; in fact, McKinsey & Company (2019) estimated that, on average, a one percent price increase leads to a 22 percent increase in EBITDA margins, far more than any other tools of operational management. Nevertheless, managers in industrial marketing tend to neglect pricing as a tool, as it is estimated that less than 15 percent of companies conduct systematic research on this subject (Hinterhuber & Liozu, 2012). The pricing decision should be at the core of every business plan, especially since it is directly linked to the critical components of a company's marketing strategy (Lancioni 2005). When discussing pricing it is important to distinguish between pricing practices and pricing strategies.

2.3.1. Pricing Strategies

In the field of marketing, pricing strategies are the strategies developed by managers that consider the product stage as well as various elements or determinants that make up the pricing environment (Noble & Gruca, 1999). According to Ingenbleek & van der Lans (2013, p.28) "a price strategy offers a means by which the firm can achieve its pricing objectives in the market" in a determined pricing situation. Noble & Gruca (1999) proposed a framework for organizing ten pricing strategies into four pricing situations: new product, competitive, product line, and cost-based (Table 1, Appendix I). However, Ingenbleek & van der Lans (2013) notably argued that cost-based pricing is a pricing practice rather than a pricing situation. As shown in Table 1 of Appendix I, in the new product pricing situation, firms often rely on three main strategies: price skimming, penetration pricing, and experience curve pricing (Indounas, 2020; Nagle et al., 2010; Noble & Gruca, 1999).

Other noteworthy pricing strategies are represented by customer value pricing and price bundling, that are frequently used in product line pricing situation. Customer value pricing consist of pricing one version of the product at very low/competitive levels, offering fewer or lower quality features than other versions, addressing a specific market segment. Bundling, on the other hand, involves offer other product/services together with the core product.

2.3.2. Pricing Practices

While pricing strategies are observable in the market through price changes, bundled offers, and different price levels within a product line, pricing practices are hidden behind the boundaries of the organization. Specifically, pricing practices refer to the activities that a firm performs to arrive at a price decision.⁶ Qualitative evidence suggests that firms employ various types of information in the price-setting process (Ingenbleek et al., 2003). The extent to which managers use specific types of information to base prices can be categorized into three price-setting practices: value-based, competition-based, and costs-based pricing. (Ingenbleek & van der Lans, 2013; Guerreiro & Amaral, 2018).

Figure 1: Successful New Product Pricing Practices (Ingenbleek et al., 2003)

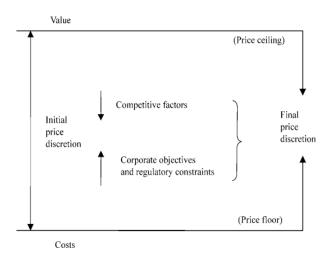


Figure 1 shows a framework conceptualized by Ingenbleek et al. (2003) based on Monroe's (1990) work. A successful price lies between two boundaries: (1) the price ceiling, which is the maximum price that could be charged based on the client's perception of value, and (2) the price floor, which is determined by costs for the firm. In addition to these boundaries, there are driving forces in the market that contribute to a final price discretion, namely competitive factors, and corporate objectives/regulatory constraints. Since these practices are not mutually

⁶ Although the term "pricing methods" is also used in the literature to describe these activities, it can be misleading since it suggests the use of mutually exclusive methods. Therefore, the term "pricing practices" is more appropriate.

exclusive and different pricing practiced impact product performance differently depending on the product stage and market scenario, managers should adopt a contingency approach when setting or changing the price of a service/product. However, value-based pricing, though challenging in B2B markets, is recognized as a superior pricing practice, especially when launching a new product (Christen et al., 2022). Value-informed pricing generally contributes positively to new product performance, particularly when the relative product advantage is high, and competitive intensity is low (Ingenbleek et al., 2003). Cost-based pricing (i.e., costplus pricing) can help managers understand the price floor; however, it does not reflect how much a potential customer is willing to pay (Christen et al., 2022; Hinterhuber, 2016).

Although cost-based pricing is historically the common pricing practice since its theory is based on financial prudence, (Nagle & Müller, 2018) argue that, in practice, it could be misleading and potentially dangerous as financial performance-based decisions could lead to overpricing in weak markets and underpricing in strong ones. In contrast, pricing based on competition levels can lead to a loss in profit margin if the market price does not reflect the individual's perceived value (Nagle & Muller, 2018).

2.3.3. Value-Based Pricing

Zimmerman & Blythe (2018) suggest that the most favorable approach to setting a price is to base it on the value customers place on the product. A common definition of customer perceived value was formulated by Zeithaml (1988), which defines it as a trade-off between salient "give" and "get" components, specific benefits, and sacrifices perceived by the customer in a supplier's offering. The concept of value is strongly linked to the exchange theory of marketing, particularly to voluntary market exchange. Since voluntary market exchange only occurs when the parties involved in the transaction expect to reach a higher level of satisfaction after the exchange, perceived value is at the core of marketing (Eggert & Ulaga, 2002). A research study conducted by Eggert & Ulaga (2002) indicates that customers' value perception of value in a B2B market positively affects both their economic satisfaction and non-economic satisfaction, leading to positive behavioral outcomes such as loyalty. In a competitive and global business environment, where customers are increasingly demanding and value-conscious, understanding the concept of value is crucial to understanding purchasing behavior and decisions in the business-to-business markets (Eggert et al., 2019). This consideration is especially true when customers rely on the services that they acquire to improve their firm's profitability (Zietsman et al., 2020). Setting prices based on value requires a strong focus on value creation for the customer and an understanding of which product attributes influence the total amount that a customer is willing to pay (Christen et al., 2022). Implementing a value-based approach means that the differences in pricing across customers reflect differences in the value to customers, and value-based market segmentation is one of the best practices (Nagle & Müller, 2018). However, the authors remind us that value based-pricing is not customer-driven pricing, which may lead to suboptimal pricing as well. When a company prices to achieve short-term sales objectives, it undermines the perceived value and may depress future profitability. The objective must be capturing more value, not necessarily making more sales.

In B2B, understanding the customer's business and providing a product through which the client can improve its operations is an excellent way of achieving profitable pricing through value-based pricing (Kienzler, 2018; Zimmerman & Blythe 2018). According to Hinterhuber (2016), the fundamental principle of value-based pricing is that there is no correlation between customer value and actual company costs.

Zimmerman & Blythe (2018, p.230) state that "Managing price properly … means thoroughly understanding costs as well as customers." As previously mentioned, the core element of a profitable pricing strategy is understanding the value delivered to the buyer because ultimately value is the primary determinant of the buyer's willingness to pay. In addition, understanding value is the key to developing effective communications campaigns to increase consumers' willingness to pay.

2.4. Willingness-To-Pay

A consumer's willingness-to-pay (WTP) is crucial information for both managers and academics. As previously stated, WTP is the central input for optimal price setting. Willingness-to-pay is defined as the maximum price a consumer is prepared to pay for a given quantity of a product or to get access to a service (Schmidt & Bijmolt, 2020). The academic literature indicates that there is a wide variety of both direct and indirect methods to measure WTP that vary in their accuracy (Schmidt & Bijmolt, 2020).⁷ In addition to being direct or indirect, the methods employed for measuring WTP can also be categorized into hypothetical or real scenarios (Miller 2011). Although hypothetical methods are known to generate hypothetical bias, Miller (2011) finds that they may still lead to the right demand curves and the right pricing decisions. A prevalent assumption in the marketing literature is that indirect methods (i.e choice based conjoint analysis) can provide a more accurate measure of WTP than direct methods; many researchers assumed that direct methods engender a stronger hypothetical bias, evoking

⁷ Accuracy is defined as how closely the hypothetically measured WTP matches consumer's real WTP; the difference between the two measures is defined as Hypothetical bias (Schmidt & Bijmolt, 2020).

a higher price consciousness in the respondent (Schmidt & Bijmolt 2020). Nagle & Muller (2018) severely criticize direct methods stating that they could be potentially very misleading. Regardless, a vast number of marketing practitioners notably continue to rely on direct survey methods since it tends to be easier to implement. Additionally, a recent study published in the Journal of the Academy of Marketing Science contradicts the prevailing wisdom in academic literature and supports the current practice in companies (Schmidt & Bijmolt, 2020). Schmidt & Bijmolt (2020) conducted a meta-analysis of 77 studies reported in 47 papers, resulting in a sample of 24,347 observations for hypothetical WTP and 20,656 observations for real WTP. The study shows that direct methods result in more accurate estimates of WTP compared to indirect methods. Therefore, in addition to requiring more costs and effort, indirect methods seem to be also less accurate. Moreover, the authors identify a substantial hypothetical bias of 21 percent on average in measures of WTP, that tend to increase when measuring WTP for products with higher values (Schmidt & Bijmolt 2020).

2.5. Segmentation

Market segmentation, while not flawless, has generated value for industrial firms and has been considered part of modern marketing for more than four decades; researchers consider the presence of customer heterogeneity to be the essential theoretical foundation for segmenting the market, which facilitates the identification of demand-based segments and firms to shape different offerings for those selected segments (Cortez et al., 2021). For example, since consumer willingness-to-pay (WTP) generally differs across sectors, implementing market segmentation can advise not only on pricing but suggest product design as well (Nagle & Müller, 2018). Segmentation offers direction for a firm's marketing strategy and resource allocation by finding a balance between overgeneralization and over-customization. The process involves grouping similar customers while acknowledging their between-group differences (Cortez et al., 2021). As stated by Bonoma & Shapiro (1983), B2B market segmentation is the "core of good industrial marketing."

The literature on industrial segmentation suggests numerous variables for creating marketing segments (Cortez et al., 2021). In the 1980s, these variables were divided into 'micro' and 'macro' variables; Abratt (1993) found that most used segmentation variables in practice are at the macro level, with industry or vertical segmentation being the leading approach. This is presumably because macro-variables, such as size, industry type, application, and geographic location, are easily observable and accessible at low cost or published by governmental statistical series (Powers & Sterling, 2008).

2.6. Engagement

When thinking about how to maintain and increase the value to customers; one key approach to this goal is to maximize engagement with them. In fact, in B2B services, the interaction between customers and the service provider is considered critical in influencing customer decisions (Nyadzayo et al., 2020). Customer engagement is a widely studied topic in marketing research and is considered the mechanism by which customers add value to the firm through direct (i.e., purchase engagement) and/or indirect contributions (i.e., influence, knowledge, and referrals) (Kumar & Pansari 2017). In other words, customer engagement leads to increases in value, trust, affective commitment, word of mouth, loyalty, and brand involvement (Vivek et al., 2012).

Although research on engagement in B2B sectors has only taken off in the last decade, this is likely due to the higher degree of complexity and heterogeneity involved in purchasing decisions relative to B2C markets, rather than the lack of importance this relational activity in this context (Nyadzayo et al., 2020). In fact, researchers have argued that B2B companies have a stronger incentive to drive their customer lifetime value through customer engagement since there is more intense competition for a small pool of potential customers that account for a larger portion of sales compared to B2C sectors (Kumar & Pansari 2017). In addition, engagement strategies play a central role in the management of B2B customer behaviors as the relationships typically are longer lasting, more technical, and often involve more complex interactions with the customer compared to B2C (Nyadzayo et al., 2020). In fact, Nyadzayo et al. (2020) found that strong purchasing engagement in the B2B market engendered an increase in the customer's dependency on the service provider, thereby reducing the customers' consideration set size and increasing their willingness to pay.

3. Methodology

This paper reflects a consulting project carried out for REDUNIQ Insights. Several meetings were initially held with the Marketing and Analytics department of REDUNIQ Insights to better understand the characteristics of the Sectoral infographics and assess the product's current situation. In addition, secondary data was primarily collected by accessing and reviewing internal reports of the company and consulting publicly available information. Those latter were required as an input to take decisions and design the primary data collection. In order to address the research questions and provide the company with useful insights, we opted for conducting an e-mail survey. The decision was taken considering that the company already had the e-mail

contacts of all its clients⁸. According to internal reports, the average "open rate" of REDUNIQ's weekly newsletter was approximately the 50%. Moreover, the adoption of e-mail survey allowed us to actually show the product to the participants and ask product-specific questions as well as increasing the awareness of the product. The communication department was involved in the project and the survey, once realized, was fully translated into Portuguese. An anonymous link to the survey was attached to an e-mail sent to REDUNIQ's clients by REDUNIQ's customer support (Appendix II.A). The survey was released on Thursday 13th April in the morning. In order to pre-test it, the survey was first forwarded to 5.000 clients. Since no particular issues were encountered, the email was sent to all the other clients in the afternoon. In an effort to both increase the participation of the study and reduce the perceived uncertainty of the product, a three-month free trial of Sectorial infographics was offered to the clients that would have completed the survey. To benefit from the free trial, at the end of the survey participants had to provide the NIF of their company and the marketing department would have subsequently contacted them. This decision, after careful consideration, seemed to be the most effective way to include a "call to action" in the survey and convert prospects into clients. The survey (appendix II.B) consisted of 20 blocks of questions and its duration was esteemed to be around 6 minutes. At the beginning of the survey a quick introduction of the study was provided to the participants. In the first question participants were asked about which brands come to their mind when they think of data providers. In the second question participants were asked if they had ever heard of REDUNIQ Insights. This latter, in addition to providing an estimate of the awareness, was a screening question included in the survey to avoid the uninformed response bias. Only the participants who answered "yes" to the second question were presented with blocks number three, four and five; the others were presented with a brief introduction of REDUNIQ Insights before being redirected to question number six. In the third question it was asked where they heard about REDUNIQ insights. In the fourth question participants were asked to rate on a scale one to three their familiarity with each product currently offered by REDUNIQ insights⁹. In question number five, through a Likert scale, an attempt to measure the perceived image of REDUNIQ Insight was made. Given the fact that REDUNIQ insight is a relatively new brand, and its services consist of providing information, it was decided to not investigate the brand image any further. Afterwards, all participants involved in the study were presented with a brief introduction to Sectorial Infographics and a

⁸ Allowing to reach the target population rapidly and without significant costs.

sample of the product was shown. Considering that REDUNIQ Insights didn't want to deliver specific information for free, regardless of their respective sector, all participants were presented with the sample related to the restaurant industry, that is the one publicly available on the REDUNIQ insights webpage. Participants were asked to rate on a scale 1 to 7 how useful was for their firm to monthly receive the information provided in Sectorial Infographics and how clear were the information provided in the PDF. Subsequentially, in order to assess the value perceived of the product and their willingness to pay, participants were asked to indicate what they thought was an appropriate price per month to receive Sectorial Infographic on a monthly basis. In question number nine participants were informed that Sectorial Infographic is currently offered at 4,99€/month. After which they were asked to indicate on a scale of 1 to 7 what their likelihood to purchase was, given the current price. Blok number 10 consisted of six statements measured on a Likert scale. Five of them were addressed to further investigate attitudes and beliefs of the target population, namely psychographics questions¹⁰. One of them was an attention-check question to ensure that the participants were reading each question carefully and not affecting the quality of the data collected. Block number 11 consisted of 5 statements evaluated on a Likert scale (1-7) and addressed to evaluate the likelihood to purchase of the product if changes were made. The suggestions for improvement were agreed upon with the Marketing team and were intended to both investigate if specific information/ changes could significantly increase the likelihood to purchase of the product and to assess to which extent the low number of subscriptions was attributable to the fact that costumers perceived the current version of the product as not detailed enough. In question number 12, participants were asked if they could think of any specific information that would have significantly increased the value of SI to their firm. If the answer was "yes" participants were presented with question number 13. This latter was an open-ended question where participants were asked to provide suggestions¹¹. Afterwards, demographics questions were asked. Considering the B2B context, participants were asked to indicate which district their business is located in, which sector their firm is operating in, the average annual revenue¹² of the firm, and how long ago their firm was established. The latter set of questions was intended to be the main contributor in segmenting the clients, provide insights about the characteristics of the population of interest and possibly

¹⁰ The last statement was included to possibly identify a target group for Customized Reports. Participants that selected the options "somewhat agree", "agree", and "strongly agree" were presented with a brief introduction of customized report at the end of the survey.

¹¹ The question was intended as a way to identify specific clients' needs and get ideas for improvement.

¹² This question was included in the questionnaire with the aim of investigating the size of firms. The option" I prefer not to say" was provided in order to avoid data distortions.

identifying a target group for the product. Subsequently, participants were asked if their company developed data analysis in order to make strategic decisions, if they had a data analysis department and what sources of data are generally used for analysis.

As previously mentioned, the aim of the survey was to rise salience of both REDUNIQ Insights and Sectorial Infographics, collect data in order to perform qualitative and quantitative analysis and try to convert prospects into clients.

4. Secondary Data

4.1. Sectorial Infographics

The current (updated to 6th May 2023) client base of REDUNIQ¹³ consist of 66.559 firms, ranging from big corporation to sole proprietorship. Considering that some of them operates in more than one sector, according to the segmentation dataset provided by the REDUNIQ Insights Marketing department the number of merchants amount to 72.514 (table 1). The product is available to REDUNIQ customers and accessible through the customer area (Area do Cliente) upon registration. The product is currently available for a total of 13 sectors and consists of a monthly PDF including sector specific information about transactions (figure 2).

	SECTOR SEGMENTATION							
Sector N° Merchants % Mer	chants							

Table 1: Sector Segmentation of REDUNIQ's clients according to internal data (updated 6th May 2023)

Car Accessories & Mechanics	2.631	4%
Hairdressers	1.608	2%
Household Appliances & Technology	1.336	2%
Pharmacies	1.194	2%
Gas Stations	881	1%
Hypermarkets & Supermarkets	4.727	7%
Hotels & Tourism	6.816	9%
Fashion	6.106	8%
Bookshops & Stationery Stores	865	1%
Perfume Shops	405	1%
Restaurants	18.709	26%
Traditional Food Retailers	2.451	3%
Healthcare	2.056	3%
Other	22.729	31%
Total	72.514	100%

Source: Internal data

¹³ Established network of merchants that utilize the payment acceptance solutions provided by REDUNIQ.

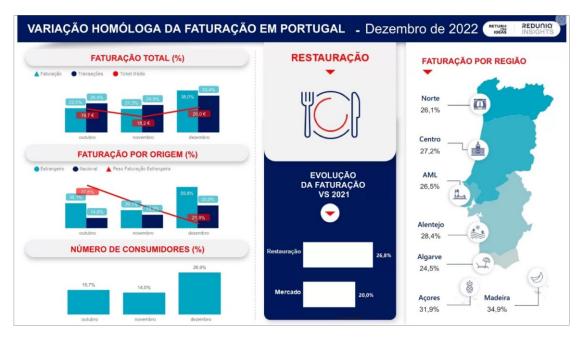


Figure 2: Sample of Sectorial Infographics (Restaurant sector)

4.2. Product-Category Competition

According to REDUNIQ's Marketing & Analytics department the main competitor of REDUNIQ Insights is represented by SIBS Analytics, the analytical branch of SIBS. Moreover, national statistic sources like INE and PRODATA, although don't constitute a primary threat, may represents an alternative source of information for businesses. In addition, when considering the product category competition of Sectorial Infographics, namely the competition among products with comparable characteristics that satisfy the same needs (Alsem, 2019), from preliminary research emerged that Mastercard, PWC and Deloitte although don't offer exactly the same products, are well known firms that provide insights about performance and trends in the market, consulting services and analysis. Therefore, it seems appropriate to also consider these latter in the category of Data Providers. Specifically, from preliminary research emerged that:

SIBS Analytics competes with REDUNIQ Insights basically on every service provided by this latter. SIBS analytics on their website provide indeed information about consumption trends on the main events in Portugal, Indicators about consumption & consumer characteristics, and tailored solutions for business that range from sector analysis to market tracking.¹⁴. Worthy of special attention, given the focus of this

Source: REDUNIQ Insights website <u>https://www.reduniq.pt/reduniq-insights/#infografia-setorial</u>

¹⁴ In direct competition with customized reports offered by REDUNIQ Insights. Source : <u>https://www.sibsanalytics.com/en/</u>

research, is the "indicators of consumption" service offered by the company. The latter presents itself as the direct competition for Sectorial Infographics and constitutes a particular threat because of four factors: (1) it is directly available for consultation from the company's web page; (2) it requires no registration, and it is free; (3) it presents more detailed information¹⁵; and (4) it is interactive.

- INE (Instituto Nacional de Estatística)¹⁶ & PRODATA¹⁷ provide reports, statistical studies, and databases about several topics. However, it is not primary focused on businesses and by examining the website it was not found any product that could directly represent a threat for sectorial Infographics. Although economy indicators are available on the platforms, those latter are not sector specific, reports mostly have annual periodicity, and they are not transactions oriented/ focused on transactions.
- Mastercard throughout his branch of Data & Services offers B2B services focused on driving value beyond the transactions and helps firms to make data driven decisions. Specifically, their product portfolio includes: (1) Test & Learn, (2) Mastercard Advisor Consulting and (3) Spendingpulse. The first is a self-service analytics platform that enables test and learn approach, The second is a consulting service provided by payment experts and the latter is a market intelligence-based service that provides insights ranging from current market trends to customer spending patterns. Moreover, the company through Mastercard Economic Institute provides webinar and periodic reports about global consumption and transaction trends. However, it should be noted that with regard to the Spendingpulse service, it was not possible to confirm the availability of the service in Portugal¹⁸.
- Deloitte offers data driven analytics solutions and insights through his branch of Strategy, Analytics and M&A. in particular they help firms identifying data-centric strategies and business opportunities. Moreover, they periodically realise reports and articles about current trends and market performance and allows firms to register to "My Deloitte" and receive customized solutions¹⁹.

¹⁵ It is possible to filter for: number/value/average amount of all operations/electronic payment operations/ cash operations performed in all districts/ a specific one with cards of all counties/ a specific country for the period between month-year and month-year in all sectors/a specific one (39 options available).

¹⁶ Source: <u>https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_main</u>

¹⁷ Source: <u>https://www.pordata.pt/Portugal</u>

¹⁸ Source: <u>https://www.mastercardservices.com/en/solutions</u>

¹⁹ Source: <u>https://www2.deloitte.com/pt/pt.html</u>

PWC is another well-established consulting firm operating in Portugal. The company
provides sector specific information and yearly reports about trends in the market. In
addition, through its Data and Analytics department helps businesses to become data
driven organization, apply analytics and take strategic decisions²⁰.

5. Results & Data Analysis

5.1. Sample Characterization

The survey was released on 13th April and closed on date 6th May. The survey was sent to 44.700 clients²¹, 19.564 opened the email and 565 started the survey. However, the study experienced a high dropout rate and presented several missing values also among the ones that finished the survey. The survey presented 150 valid responses, namely participants that passed the "attention-check question" and completed the survey. It must be mentioned that some of the participants operates in more than one sector, therefore the overall counted choices were 170^{22} (table 2). The rationale used for the division into sectors in the survey is based on the sectors for which sectorial infographics is currently available. As regards the average annual revenue²³ of the firms, around 25% belong to the category less than 100.000€, around 34% are between 100.000€ and 500.00€ in annual revenues, 10% between 500.000€ and 1.000.000€, around 9% between 1.000.000 € and 3.000.000€, around 9% more than 3.000.000 and approximately 13% preferred to not indicate their revenue²⁴. With regard to geographic location almost 50% of the participants operate either in the districts of Lisbon or Porto. The others are more disperse among the country's districts²⁵. In particular, around 29% operate in the north, 8% in the islands, around 15% in the center and around 50% in the south²⁶. 24% of the firms were established in the last 5 years, 16% between 5 and 10 years ago, 18% between 10 and 20 years ago, and around 25% were established more than 30 years ago. In addition, 50 % of the participants stated that their company develop data analysis in order to make strategic decision based on data. Overall, 50 participants provided their NIF to benefit from the 3 months free trial²⁷.

²⁰ Source: <u>https://www.pwc.pt/pt/servicos/advisory/consulting.html</u>

²¹ Clients with a valid e-mail address.

²² Percentage of firms per sector is calculated on 170.

²³ Annual revenue ranges were decided in agreement with the Marketing-Analytics team.

²⁴ Percentage is calculated on 150.

²⁵ Specific information can be found in appendix.

²⁶ Lisbon metropolitan area is considered as South.

²⁷ Some participants selected more than one sector, so the overall requests to benefit from the free trial were 53.

SAMPLE								
Sector	N° Clients	% Clients	Free Trial					
Car Accessories & Mechanics	3	1,8%	1					
Hairdressers	2	1,2%	0					
Household Appliances & Technology	4	2,4%	3					
Pharmacies	9	5,3%	3					
Gas Stations	4	2,4%	2					
Hypermarkets & Supermarkets	3	1,8%	1					
Hotels & Tourism	36	21,2%	17					
Fashion	12	7,1%	5					
Bookshops & Stationery Stores	б	3,5%	3					
Perfume Shops	1	0,6%	0					
Restaurants	31	18,2%	10					
Traditional Food Retailers	8	4,7%	2					
Healthcare	10	5,9%	б					
Other	41	24,1%	N/A					
Total	170	100%	53					

Table 2: Sample's Sector Segmentation

Source: Survey data

5.2. Brand Knowledge

The first section of the survey was intended to assess the Band Knowledge²⁸ of REDUNIQ Insights and the awareness of the services provided by this latter. Considering that REDUNIQ INSIGHTS is a relatively new brand and that the product category was also found to be difficult to define clearly and exhaustively, it was decided to measure brand awareness through an aided recall test instead of an unaided-recall one²⁹. Specifically, participants were presented with a list of companies (focal brand and competitors emerged from preliminary research. The Top 3 companies identified as Data Providers are: INE followed by SIBS and REDUNIQ, respectively with the 54%, 42%, 42% of participants (figure 3).

²⁸ Namely, Brand Awareness and Brand Image

²⁹ Moreover, the Marketing department preferred to include in the pool of options only the umbrella brands REDUNIQ and SIBS.

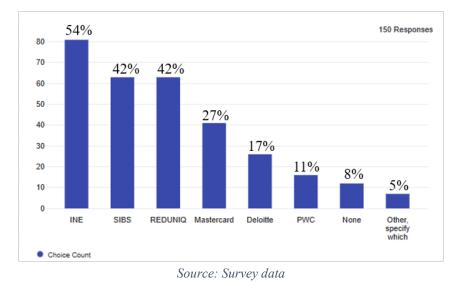
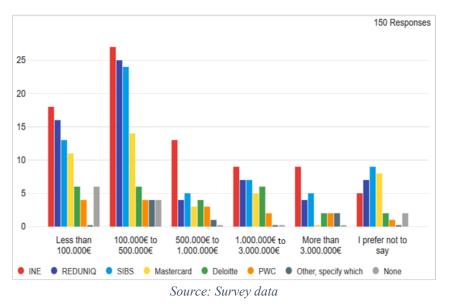


Figure 3: Brand Recall given the Product Category

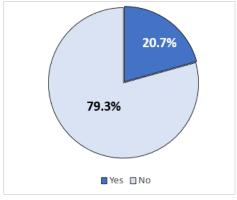
Results were broken out by revenue classes, but as shown in the graph below they approximately present the same ranking (fig.4). The option to further explore the results with crosstabs was disregarded.





Subsequentially, willing to assess the brand recognition of REDUNIQ Insights, namely the ability of customers to recognize prior exposure to the brand when they came across it, respondents were presented with the brand name & logo and asked if they had ever heard about it. Results shows that only around 21% (31/150) of participants recognize the brand (fig. 5).

Figure 5: Brand Recognition



Source: Survey data

Considering that in the previous question the percentage of respondents that Identified REDUNIQ as a Data Provider company was significantly higher (41% vs 20.7) the results of this latter rise two hypothesis: either the results of the first questions were influenced by the courtesy bias ³⁰ or, although REDUNIQ clients are somewhat aware of the new information services provided by the firm, there is still need to invest on the depth of the brand recall for REDUNIQ Insights. Considering that the that the awareness rate was calculated on a random sample of 150 participants, assuming that the sample is representative of the population of interest, we can do a step further and provide a confidence interval of the REDUNIQ Insights' awareness among REDUNIQ clients (population parameter). Knowing that the awareness proportion in the sample is 20,7% (31/150 participants), a 95% confidence interval for the population proportion is:

$$p \pm z \sqrt{\frac{p(1-p)}{n}} = 0,207 \pm 0,065$$

The awareness of REDUNIQ Insight among REDUNIQ clients should therefore range between 14,2% and 27,2%.

Participants that confirmed prior exposure to the brand (31partecipants) were questioned further to deepen investigate their level of knowledge of the services provided by REDUNIQ Insights. Their familiarity with the services was rated on a scale of 1 to 3. (1-I never heard of it, 2-I have a general idea, 3- I have a clear idea). Results show that the mean of familiarity level is almost the same for all the 4 products in the portfolio and it is close to 2, namely participants that recognize the brand have a general idea all the services offered.

³⁰ The survey was attached to REDUNIQ newsletter, the sender was therefore evident.

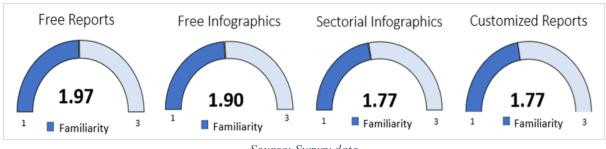


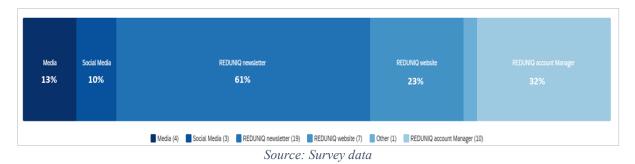
Figure 6: Familiarity with the Services

Source: Survey data

To deepen investigate if there is any statistically significant difference between the level of familiarity with each product, the non-parametric Friedman's test was performed. Considering the small sample available and the fact that the measurement was made on an ordinal scale, the latter was considered more suitable than the implementation of repeated measures ANOVA. However, the related samples Friedman's two-way analysis of variance by ranks presents a sig. of 0,313, indicating to retain the null hypothesis that the distribution of familiarity with the services is the same. Multiple comparisons were not performed because the overall test retained the null hypothesis of no differences (appendix III.C).

In an attempt to investigate which was the most effective communication channel implemented by REDUNIQ insights to increase brand awareness, participants that recognized the brand were asked to indicate where did they hear of REDUNIQ Insights. What emerged is that the most effective channel was REDUNIQ Newsletter³¹, followed by RI Account Manager, Website, Media, and Social media. The sample consisted of 31 respondents and considering that multiple choices were allowed, the overall counted choice were 44³².





Thereafter in an effort to explore the Brand Image and favorability of REDUNIQ Insights, participants were presented with a list of brand association relevant to REDUNIQ's frame of reference, and the strength of those associations was measured on a scale 1(totally disagree) to

³¹ It might be due to a bias, considering that the survey was attached to a newsletter.

³² Percentage in the graph do not add up to 100% due to the multiple responses.

7 (totally agree). Looking at the results we can notice that for all the associations the mean is close to 5, namely" somewhat agree". And the distributions of the responses tend to the right side of the scale (appendix III.D), involving overall favorability towards the brand and positive associations. Giving the small sample available, quantitative analysis was disregarded.

	Ν	Minimum	Maximum	Mean	Std. Deviation
REDUNIQ Insights services positively affect the Image of REDUNIQ	31	4	7	5,39	1,2002
REDUNIQ Insights provides valuable services	31	4	7	5,10	1,044
REDUNIQ Insights services are unique	31	3	7	4,48	0,890

Table 3: Brand Associations

Source: Survey data

5.3. Product characteristics

Considering that the Sectorial Infographics basically provides sector-specific information about transaction, the two main characteristics that were assessed to understand the product-fit with REDUNIQ clients were the usefulness of the information provided and the clearness of the information provided. The findings indicate that overall, the product is perceived as slightly useful, and slightly clear/clear.

Table 4: Produc	et Characteristics
-----------------	--------------------

	Ν	Minimum	Maximum	Mean	Std. Deviation
Usefulness of information	150	1	7	5,240	1,518
Clearness of information	150	1	7	5,453	1,162

Source: Survey data

To deepen investigate if the perceived usefulness of the information provided differs between different revenue classes, namely firm size, one way ANOVA was implemented. Levene' test of homogeneity of variances has a sig. of 0,229, therefore homogeneity of variances that is not rejected. However, the ANOVA test presented a sig. of 0,957 indicating that there is not an overall statistically significant difference in group means (table 6). Moreover, considering that the means are basically the same for all the categories, the option of grouping in small, medium, and big firms was disregarded (appendix III.F).

	N participants	Minimum	Maximum	Mean	Std. Deviation
Prefer not to say	20	1	7	5,0500	1,98614
Less than 100.000€	37	2	7	5,2162	1,45555
100.000€ to 500.000€	52	1	7	5,2885	1,43262
500.000€ to 1.000.000€	15	2	7	5,5333	1,35576
1.000.000€ to 3.000.000€	13	2	7	5,2308	1,58923
More than 3.000.000€	13	2	7	5,0769	1,55250
Total	150	1	7	5,2400	1,51803

Table 5: Descriptive Statistic Usefulness-Revenue Classes

Source: Survey data

Table 6: ANOVA summary table

	Sig.
Homogeneity of variances (Levene's test)	0,229
ANOVA Between groups	0,957

Source: Survey data analyzed through SPSS

The same procedure was implemented for the variable "age of the firm" (when the firm was established), once again sig. of ANOVA was 0.293 indicating that there is not statistically significant difference in group means. The overall sample considered was 149 respondents³³. (appendix III.G).

Moreover, we wanted to investigate if the sector of belonging (sector the firm operates in) has any impact on the perceived usefulness of the information provided. Three different procedures were implemented in an attempt to address this question: One way ANOVA, Independent-Samples Kruskal-Wallis Test, and Linear regression.

Implementing the ANOVA two crucial issues arise: two assumptions of the model, namely the independence of observations³⁴ and the normal distribution of the dependent variable for each category of the independent variable, are violated. The first violation is a consequence of how the survey was structured³⁵, the latter is mostly due to the really low participation rate. In fact, taking into consideration the Central Limit Theorem, every category should have at least 30

³³ "I don't know" option was considered as missing value.

³⁴ There must be no relationship between the observations in each group or between the groups themselves. However, there are not even the conditions required to implement a repeated measures ANOVA design.

³⁵ Participants whose firm operates in more than one sector were allowed to select more than one sector but were asked about the perceived usefulness of the product only one time. It represents an oversight in the design of the survey.

responses to at least assume a normal distribution. However, although not procedurally proper, an attempt was made by provisionally giving the normal distribution as assumption (ANOVA it is known to be quite robust to violations of normality) and the independence of the observation was obviated by considering each response as independent and thus a sample of 170 participants instead of 150 (this assumption was judged to be conceptually acceptable considering that participants operating in more than one sector are actually in charge to take decision for more than one sector³⁶).

Running the ANOVA, the assumption of homogeneity of variances is rejected. Usually when this assumption is violated, we should look at the two robust tests of equality of means: Welch or Brown and Forsythe test. However, these tests were not even provided by SPSS because category "perfume shops" presented only one participant and at least one other category had 0 variance. Nevertheless the sig. of the ANOVA model is 0,214. Post-hoc tests were disregarded. (appendix III.H.1) As previously mentioned, one of the main assumptions of the ANOVA model is that the dependent variable should be approximately normally distributed for each category of the independent variable. The Shapiro-Wilk test was therefore performed to investigate this latter assumption. The result of the test shows that for most of the categories the assumption is violated (sig below 0.05), and the main issue lies in the fact that the null hypothesis, that the variable is normally distributed, is also violated for categories with the most participants, such as Restaurants and Hotels (appendix III.H.2).

To overcome the problem of the normal distribution's violation, we tried to resort to the implementation of the non-parametric Kruskal-Wallis Test. However, sig. of the test is 0,461 and we retain the null hypothesis that overall, the distribution of usefulness of information provided is the same across categories of sectors. (appendix III.H.3). Moreover, it has to be mentioned that considering that 10 out of 14 categories don't reach 10 participants for each category it seems far-fetched that the responses could be considered representative of the entire category, and therefore generalize the results and interpret the means.

The last model implemented in an attempt to investigate the relation between usefulness perceived and the sector is Linear regression. The advantage of this model is that it doesn't strictly require the independence of observations and participants can belong to more than one category. Therefore, considering the sample of 150 participants we proceed with the implementation of linear regression with dummy variables, creating a dummy variable (0-1)

³⁶ Alternative approaches could have been to arbitrary force multiple categories into one or grouping sectors. However, both alternatives were judged as more distortive.

for each sector. Linear stepwise regression³⁷ was implemented on SPSS. No variables were entered in the equation. To double check the results, linear regression was run with enter method. Results shows that the model is not significant (sig.0,208), R square is 0,120 and all the p values of the variables entered are way above the significance level (Table 7). More details can be found in appendix III.H.4.

					Model	Summai	γ ^b				
							Cha	nge Statistics			
Model	R	R Square	Adjusted R Square	Std. Err the Esti		luare ange	F Change	df1	df2	Sig. F Change	Durbin- Watson
1	,346 ^a	,120	,029	1,4	19623	,120	1,313	14	135	,208	1,75
Boo Tou	okshops & S urism	Stationery Stor		s, Tradition	al Food Retaile					echanics, Perfum Restaurants, He	
					Coeffi	cients	1				
			Unst	andardize	d Coefficients		dardized efficients			Collinearity	Statistics
Nodel				В	Std. Error		Beta	t	Sig.	Tolerance	VIF
	(Constar	nt)		4,689	,381			12,317	<,001		
	Car Acce Mechanic	ssories & cs		-1,205	,930		-,111	-1,295	,197	,881	1,136
	Hairdressers			,811	1,124		,061	,721	,472	,897	1,114
	Househo Technolo	ld Applianc gy	es&	1,174	,814		,125	1,442	,151	,868	1,153
	Pharmad	ies		-,516	,590		-,081	-,874	,384	,761	1,315
	Gas Stat	ions		,069	,855		,007	,080,	,936	,786	1,272
	Hypermarkets & Supermarkets			,998	,878		,092	1,137	,258	,988	1,012
	Hotels &	Tourism		,677	,395		,191	1,712	,089	,523	1,910
	Fashon			-,026	,548		-,005	-,048	,962	,675	1,482
	Booksho Stores	ps & Statior	iery	,569	,675		,074	,843	,401	,852	1,174
	Perfume	Shops		1,311	1,544		,071	,849	,397	,945	1,058
	Restaura	ints		,784	,413		,210	1,896	,060	,533	1,878
	Tradition Retailers			-,124	,632		-,018	-,196	,845	,741	1,350
	Healthca	re		,963	,591		,159	1,630	,105	,688	1,454
	Other			,478	,378		,141	1,265	,208	,526	1,903



Source: Survey data analyzed through SPSS

The same procedure (appendix III.H.5) was tried grouping and considering only the sectors Restaurant, and Hotel & Tourism as independent variables since these latter were the ones with more participants (respectively 31, 36). In this case Sig. of the model is found to be slightly above the significance level (0,069). In collinearity statistics the VIF is lower than 2,5 and tolerance is above 0,4. In collinearity diagnostics condition index are way below 15 indicating no multicollinearity issues. However, the R square is only 0.036. Restaurant sector is found to be sig. at 0,069 and Hotel & tourism has a p-value of 0,109. The mean is 5,240, standardized beta coefficients are respectively 0,149 and 0,131. Unstandardized beta coefficients are

³⁷Settings: entry at 0,05- removal at 0.1

respectively 0,557 and 0,465. Durbin- Watson index is around 2 (1,768)³⁸ This result is actually in line with the numerosity of participants that provided their NIF to receive the 3-months free trial (respectively 17 for Hotel & Tourism and 10 for Restaurant out of 50), so these 2 categories might consider the product as more useful compared to other sectors. Although it would have been interesting to also investigate the interactions between variables (sector, age, and revenue class) by implementing N-way ANOVA or linear regression, considering the limited sample available and the results of the previous attempts, this option was disregarded.

5.4. Market-Product fit, Psychographics and Characteristics

This chapter is primary aimed to assess the market-product fit of the product, namely if it is providing enough information for businesses. Moreover, the results of the psychographics and characteristics questions will be presented and used in the next chapter as independent variables for the implementation of linear regression having likelihood to purchase of Sectorial Infographics as dependent variable.

5.4.1. Sectorial Infographics provide enough information for businesses Looking at the descriptive statistics, we can notice that the mean is 4,11 that is close to the "Neither agree nor disagree" option. Details about the distribution of the variable are shown below (appendix III.I).

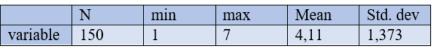


Table 8: Sectorial Infographic provides enough information.

Source: Survey data

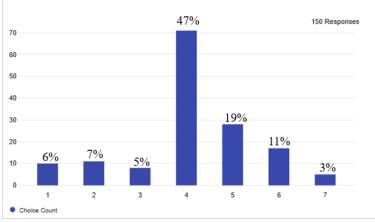


Figure 8: Sectorial Infographics provides enough information.

Source: Survey data

³⁸ Variables X are fixed and non-stochastic.

The results were explored breaking out the variable by different revenue categories. One-ANOVA was run, homogeneity of variances is rejected (0,017), Welch's robust test of equality of means s has sig. 0.769. ANOVA sig. of 0,781 (appendix III.I.1).

Applying the same logic described in paragraph 3.2 for the variable usefulness, a sample of 170 firms was considered. Looking at the descriptives, the mean of almost all the sectors is close or below 4³⁹. ANOVA was implemented considering all the 14 categories, homogeneity of variances is not rejected (0,142) ANOVA sig. of the model is 0,332. There is not an overall statistically significant difference in group means. Post- Hoc test was not even performed by SPSS because category "perfume shop" has less than two cases. An attempt to obtain post- hoc tests was made considering the category "perfume shops" and "hairdressers" as missing values. However, the model was still found not significant and looking at post hoc tests the main differences observable looking at the estimated means were not significant. The option was therefore disregarded (appendix III.I.2).

5.4.2. Psychographics

Descriptive statistics and distributions of the psychographics and characteristics variables are reported below (table 9, figures 9-10-11-12). Detailed information is provided in appendix (appendix III.L).

	Ν	Min	Max	Mean	Std. dev
1.My firm values data analysis	150	1	7	5,01	1,559
2.My firm needs information about transactions	150	1	7	4,08	17,17
3.My firm has the competences/ tools to process the information provided in Sectorial Infographics	150	1	7	4,14	1,761
4.My firm would like to receive more customized reports containing more detailed information about transactions and the market	150	1	7	4,43	1,668

Table 9: Pa	ychographics
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Source: Survey data

³⁹ Exped for sector Bookshops & Stationery Stores



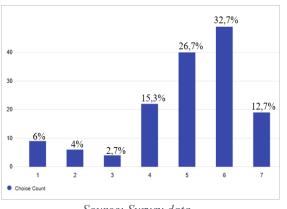
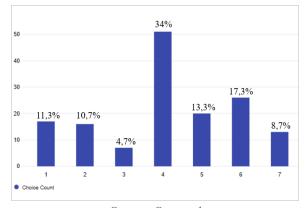


Figure 11: Distribution variable 3

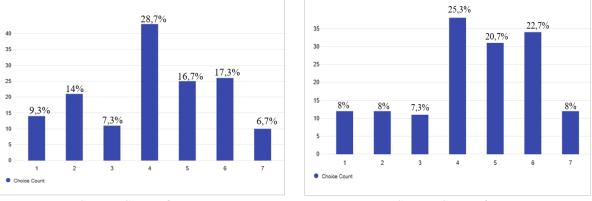












Source: Survey data

Source: Survey data

Considering that variable number 4 was included in the survey with the secondary aim of possibly identify a specific segment interested in Customized report, an attempt was made implementing one-way ANOVA considering Revenue classes as independent variable. Homogeneity of variances is not rejected (sig. 0,723), However ANOVA sig. is 0,442. Looking at the descriptives the means range between 4 and 5 for all the revenue classes (appendix III.L.1).

5.4.3. Characteristics

	N° Yes	% Yes	N° No	% No
Implementing data	75	50%	75	50%
analysis to take decisions				
Having a data analysis	13	8,7%	137	91,3%
department				

Source: Survey data

Descriptive statistics are consultable in appendix III.M. Moreover, firms that stated that implement data analysis to take decisions⁴⁰ were asked about the sources they implement for data analysis. The two main sources are: self-collected by the firm (84%) and general public data (43%)

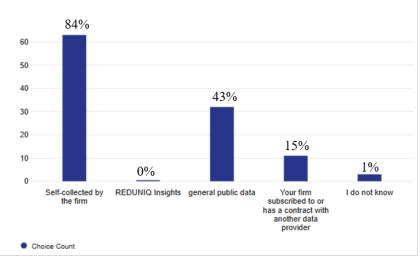


Figure13: Data sources used for the analysis.

Participants that selected the option "My firm subscribed to or has a contract with another data provider had the possibility to specify which one. The firms provided are: Sifarma guest, IQVIA, Glintt, GALP, HMR, EINFORMA. By checking the websites of the firms provided, the ones that seems to be noteworthy for possible future research are EINFORMA and Glintt.

5.5. Perceived Value & Likelihood to Purchase.

Participants were asked what they considered an appropriate price per month for monthly receiving Sectorial Infographics (perceived value). Results shows that on a sample of 150 participants around 47% of respondents are not willing to pay at all for the service and the cumulative percent of 76,7% are willing to pay a price that is lower than 4.99, that is the price Sectorial Infographics is currently offered at (appendix III.N).

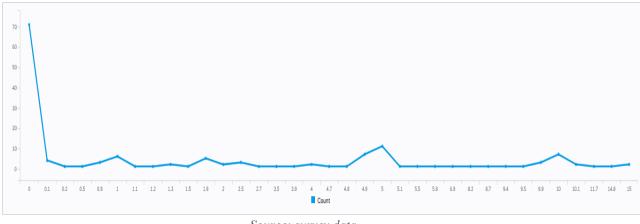
Table	11:	Perceived	Value
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	Ν	Mean	Median	Mode	Std. Deviation
Perceived value	150	2,598	0,150	0.000	3,726

Source: survey data

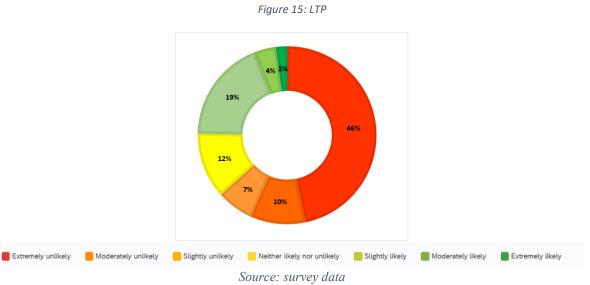
Source: survey data







As regards the likelihood to purchase, after having assessed the perceived value of the service, participants were informed that SI is currently available at 4,99€/month. The results of the survey are actually in line with the previous question showing that on a sample of 150 respondents 46,7% consider the likelihood to subscribe, extremely unlikely, 10% moderately unlikely, 6,7% slightly unlikely, 12% neither likely nor unlikely, 18,7% slightly likely, 4 % moderately likely, 2 % extremely likely (Figure 15).



Looking at the descriptives we can notice that the mean of the overall likelihood to purchase is 2,66, that is between the "moderately unlikely" and the "slightly unlikely" option (appendix III.N).

This variable was included in the survey with the primary objective to possibly identify a target group for the service. When the survey was designed the main idea was to implement a N-Way ANOVA including interaction between the demographics variables included in the survey (sector, revenue class, age of the firm and, location). An attempt was made both using the

sample of 150⁴¹ and 170⁴². However, in both cases homogeneity of variances was rejected, none of the interaction was significant, estimated means were fragmented and considered the small sample available the results were disregarded. It has to be mentioned indeed that by further decreasing the number of participants in each "cell", this would have decreased the statistical power (ability to detect significant differences between groups), it would have led to results instability (mean estimates could be heavily influenced by outliers) and raised even higher concerns about the assumption's violations (normality distribution and homogeneity of variances).

Therefore, once again we opted for a separated analysis of the demographics categories, which was considered the less distorting option. To deepen investigate the likelihood to purchase 3 one-way ANOVA and an independent sample t-test were implemented. The aim was to explore if there is any statistically significant difference between different demographics segment and between participants that had already heard about REDUNIQ Insight.

5.5.1. Likelihood to Purchase - Location

Although originally participants were allowed to select the district their firm operates in, given the limed sample and to simplify the analysis, those variables were grouped in four main areas: North, Center, South, Islands. One way ANOVA was implemented. Levenes's test is 0,907, therefore homogeneity of variances is not rejected. Sig. of ANOVA model is 0,902. There is not statistically significant difference in group means. Means range between 2,33 to 2,85 (appendix III.O.1).

5.5.2. Likelihood to Purchase – Revenue Classes.

ANOVA was implemented, Homogeneity of variances is not rejected (Levine's test= 0,661). Sig. of the model 0.579, There is not statistically significant difference in group means. Means range between 2.00 and 3,27. (appendix III.O.2)

5.5.3. Likelihood to Purchase – Sectors

Looking at the means we can notice that for all the sectors likelihood to purchase is below 4, ranging from "extremely unlikely" to "neither likely nor unlikely". ANOVA was implemented. Homogeneity of variances is violated (sig. 0,017), Robust test of equality of means is not provided because one category has only one participant. Sig. of the model is 0,121. (appendix III.O.3). An additional attempt was made by considering the categories of "Hairdressers" &

⁴¹ Firms that indicated to operate in more than one sector where arbitrary forced into one.

⁴² Firms operating in more than one sector were considered as different firms.

"Perfume shops" as missing values. Homogeneity of variances is not violated (0,075). ANOVA sig. 0,125. Although we should disregard the post hoc tests, rising the significant value to 0.15 the insight we can get is that both Restaurants and Hotel & Tourism have a higher and significant difference in the mean compared to Gas Stations and Car Accessories & Mechanics (appendix III.O.3.1). It appears to be well established that performing inference statistic on different sectors, given such a limited sample, is far-fetched. Even if there were significant differences in likelihood to purchase for different sectors, the model would fail to capture them. We can look at the means plot, just to get some insights that could be further explored in future research.

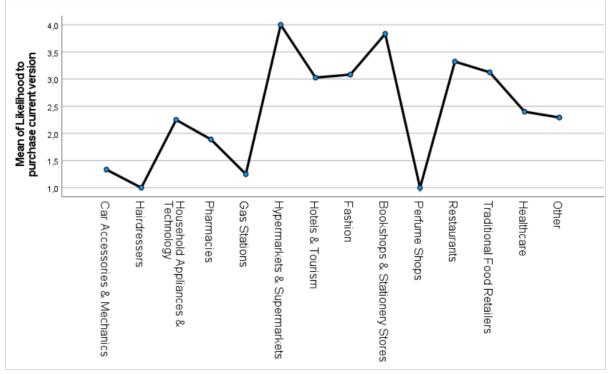


Figure 16: Means plot of Likelihood to Purchase- Sector

Source: Survey data analyzed through SPSS

5.5.4. Likelihood to Purchase – Brand Recognition.

To further investigate whether previous knowledge of REDUNIQ Insights has an impact on likelihood to purchase of Sectorial Infographics an independent sample t-test was implemented. Homogeneity of variances is not rejected (Levene's test 0,660), but we fail to reject that the two means are equal (sig 2-tailed p value is 0,354). Means are respectively 2,59 and 2,94. (appendix III.O.4).

5.5.5. Likelihood to Purchase – Linear Regression Implementation.

To further explore the likelihood to purchase, all the variables previously presented, namely the psychographics variables, characteristics variables, perceived usefulness of the product, clearness of the information provided, and demographics⁴³ (sector⁴⁴, age of the firm⁴⁵, and location⁴⁶), were considered as independent variables and linear regression was implemented with stepwise method setting the parameters probability of F entry at 0.05 and exit at 0.1^{47} . Variables entered were "My firm needs information about transactions", "Perceived value of sectorial infographics", "My firm would like to receive more customized reports", "Perfume shops" and "Implementing data analysis to take decisions". R square of the model is 0,424 (model fit⁴⁸). Durbin Watson index is around 2 (2,273). Constant is 0,033, unstandardized coefficients are respectively: 0,293, 0,201, 0,269, -3,292, - 0,520. However, to understand the relative importance of different variables and assess the impact of predictors we should look at standardized coefficients. Respectively: 0,272, 0,405, 0,242, -0,145, -0,141. Perceived value of sectorial infographics is the strongest predictor. The variable implementing data analysis to take decision has a negative effect, and surprisingly the variable my firms would like to receive more customized report has a positive impact on LTP. Looking at the table of coefficients in collinearity diagnostics tolerance is above 0,4 for all the independent variables. In collinearity diagnostics the condition index is significantly below 15 for all the variables included in the model. Therefore, we can state that there are not multicollinearity issues. (appendix III.P). Checking the assumptions of the model they seemed to be not violated: mean of error term is zero, variance of error term is a constant and is independent of the values of X, error terms are independent of each other, variables of the independent variable X are fixed. Therefore, we should be able to generalize the results.

5.6. Product Changes

As previously mentioned in the methodology section, during the meetings held with the Marketing & Analytics department possible suggestions for improvement were made. To test if they could have any impact on the likelihood to purchase, Repeated Measures ANOVA was implemented. Descriptive statistics table suggests that on average the product with the highest

⁴³ Except for the revenue class.

⁴⁴ Converted into dummy variable.

⁴⁵ Considered as ordinal. The "I don't know option" was considered as missing value.

⁴⁶ Converted into dummy variable.

⁴⁷ An attempt was made setting 0,1-0,2: variables Hairdressers and Gas stations were added both with negative impact. However, R square was 0,447.

⁴⁸ It measures the variance in the dependent variable that can be explained by the independent variables.

likelihood to purchase is the one where all the changes are implemented, and the least likely to be purchased is the current version.

Version	N participants	Mean	Std. Deviation
1	150	2,66	1,849
2	150	3,37	1,913
3	150	3,29	1,848
4	150	3,79	2,014
5	150	3,85	2,005
6	150	3,86	2,040

Table 13: Descriptive Statistics- Product Versions

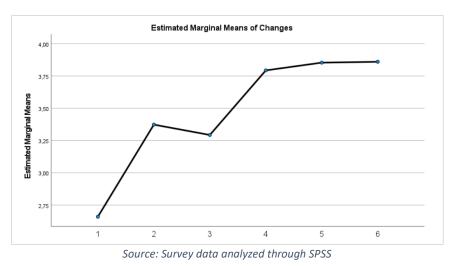
Source: Survey data

We tested the sphericity assumption with Mauchly's test of sphericity. Since the sphericity assumption is rejected, we must use the tests of equality of means that do not assume sphericity (Greehouse-Gauser, Huyn-Feldt, Lower-bound). The p-value of those tests is around 0.01, which means that we can reject the null hypothesis that all versions have the same likelihood to be purchased. We can use the pairwise comparisons tests to compare the means of likelihood to purchase two by two.

- 1) Current version.
- 2) If SI were more interactive and not only a PDF file.
- 3) If in the section of "billing by origin" the first three foreign nationalities were specified.
- 4) If the average transaction value detailed for every region were provided.
- 5) If the day of the week with the highest expenditures were specified
- 6) If all the previously mentioned changes were made.

Those tests suggest that the brand preference means are significantly different for all pairs except for version 2-3 & 4-5-6. we can state that the less likely version to be purchased is the current one and the most likely versions to be purchased, are 4-5-6. (appendix III.P)





However, looking at figure 17, we can notice that there is a growing trend. Therefore, we should be cautious in the interpretation. Two possible explanations are.

- A) Providing the average transaction value detailed for every region and the day of the week with the highest expenditures are two changes that have a strong impact on the likelihood to purchase.
- B) Considering the method in which the questions were asked, participants added up the effects of each change to the previous ones. The conclusion would therefore be that the higher the number of information provided, the higher the likelihood to purchase. However, it should be mentioned that all the means are below 4 out of 7 (figure 17).

Additionally, participants were allowed to provide suggestions that would have significantly increased the value of Sectorial Infographics for their firm. 31 participants provided suggestions. However, no significant pattern or recurrent world was identified due to the low number of participants. The general feedback is that firms want more and more detailed information about type of clients and their nationality, total value of transactions and more specific geographics area (appendix III.Q).

6. Conclusions & Managerial Implications

As emerged from preliminary research and confirmed by the aided recall test⁴⁹, the main threat for Sectorial infographics is represented by SIBS Analytics. SIBS seems to have indeed the same awareness of REDUNIQ among REDUNIQ's clients and provide a comparable if not better service consultable for free on their website: Consumption Indicators⁵⁰. This is actually the reason why SIBS analytics was not explicitly mentioned in the survey and a comparison between product features and competitors' ones was not included⁵¹. What emerged from the study is that although the product itself has a good market-product fit, being on average perceived as able to provide clear (5,24/7) and slightly useful (5,45/7) information, the service does not seem to be able to completely satisfy the firms' need for information. Most of the participants would like to receive more detailed information. The service seems to be perceived more as a "nice to have" than a valuable service for the B2B market, regardless the size, the age, the sector of the firm. The key-factor that seems determine a really low likelihood to purchase is the mismatch between the perceived value/WTP for the product and the current price⁵². However, it seems that by increasing the number of information provided, the likelihood to purchase tend to increase as well, so this could be a possible way to obviate the price mismatch. Every attempt of possibly identifying a specific segment more interested in the product or factor that could lead to a higher likelihood to purchase was found as not statistically significant, or not actionable. What seems to emerge from the research is that the service can be considered as an "entry level product" and the likelihood to purchase decreases as the firms' attitude towards data analysis increases.

It might be possible that the findings were severely affected by the small sample size available, and a deeper and wider research might have led to different conclusions. However, my personal suggestion based on the study conducted is to consider either to intensify communication campaigns explaining to REDUNIQ clients the value of the product and how they could benefit from it⁵³, or seriously assess alternative pricing strategies, like bundling⁵⁴. Significantly lowering the price, could lead to a higher demand but would than results in negligible revenue streams, given the fact that 4,99€ is already a low price for a B2B market. A possible approach could therefore be either to provide Sectorial Infographics for free or to significantly extend the

⁴⁹ Given the product category.

⁵⁰ Consumption indicators - SIBS Analytics

⁵¹ We did not want to raise the awareness of competitors or provide a specific frame of reference.

 $^{^{52}}$ The same conclusion emerges looking both at the descriptives and at the results of linear regression implementation.

⁵³ As pricing is indeed vale capturing (Nagle & Müller, 2018).

⁵⁴ Providing the service as a complementary part of REDUNIQ's payment acceptance solutions.

duration of the free trial and focus primarily on Customized Reports (premium version). This latter can provide indeed valuable and actionable insights to firms⁵⁵ and therefore being monetized. By doing that, REDUNIQ would maybe sacrifice some profits in the short term⁵⁶, but they would strengthen the tie with the brand and rise their client base's engagement and loyalty⁵⁷. Another consideration that has to be made is that undoubtedly the company should strive to increase the salience of REDUNIQ Insights, that seems to be really low among REDUNIQ clients. Unfortunately, the study failed to identify specific segments in the population that should be primary target both for Sectorial Infographics and Customized Reports. Relying on descriptive statistics and the few statistically significant insights provided by the present research, REDUNIQ insights should primarily target the following sectors for sectorial infographics: Hotels & Tourism, Restaurants, Supermarkets & Hypermarkets, Fashion, Bookshops & Stationery Stores. On the other hand, Perfume shops, Hairdressers, and Gas stations and Car Accessories & Mechanics seem to be lees receptive to the product. The firm size and the location seem to have no impact on both usefulness perceived and likelihood to purchase. Lastly, as emerged from the literature review, involving clients in the value creation process leads to positive behavioral outcomes and allows value-based pricing strategies. Therefore, the firm should strive to be market oriented, since a market-oriented culture enhances the creation of products that perform better in the market (Langerak et al., 2004).

7. Limitations & Suggestions for Improvement

As repeatedly remarked, the main limitation of the study is represented by the low number of participants that in many cases did not allow to perform quantitative analysis or investigate interactions between variables⁵⁸, and in some cases might also have influenced the results. The survey was designed with the aim of collecting as many insights as possible⁵⁹ and conducting statistical inference on specific segments of REDUNIQ's client base. Although the present research can be regarded as a valid exploratory study capable of providing general insights on the REDUNIQ' clients attitudes and belief toward the product⁶⁰, it seems far-fetched to state that it was a fully successful study. In fact, most of the segments⁶¹ were not adequately

⁵⁵ Basically, the same approach adopted by SIBS analytics.

⁵⁶ However, they currently have only 3 subscribers

⁵⁷ Positively affecting the costumer's lifetime value.

⁵⁸ Performing n-way ANOVA including interactions between size, sector, age, location.

⁵⁹ Giving the fact that REDUNIQ insights is a recently established division.

⁶⁰ Since it was based on a random sample.

⁶¹ In particular sectors.

represented. I point out that, especially with regard to the perception of the product by different sectors, a more in-depth study would be needed before making decisions or generalize the findings⁶². Willing to learn from mistakes made, should the present study ever be implemented again in the future, it seems clear that a duration of 6 minutes was excessive, and the incentive provided⁶³ was not considered as sufficient. In fact, most of the participants dropped the survey after the second question causing the sample size to decrease from 565 to 150. Therefore, I would shorten the survey in smaller and more focused ones, since a bigger sample would allow a deeper study. Moreover, to improve the quality and accuracy of the information collected, I would suggest restructuring the design of the questionnaire: asking the sector at the beginning of the survey. By doing that, I would suggest presenting the participants with the product related to their sector and ask participants who operate in more than one sector to indicate their likelihood to purchase the service for each sector in which they operate. Furthermore, assuming that the higher the number of information provided the higher the likelihood to purchase⁶⁴, I would suggest investing more resources and showing a prototype of sectorial infographic with the additional changes, so that REDUNIQ Insights can have a definitive confirmation. Alternatively, they could simply ask to rate the degree of importance of each change/information on a scale of 1 to 7 and possibly think about implementing only the most significant ones. In this way we should be able to obviate the "sum-effect" that in my opinion affected the results of the study when implementing Repeated measures ANOVA. Lastly, since as previously mentioned the survey was designed in a way that would have led prospects to subscribe, I would redesign the final "call to action". Investing more resources would be certainly more effective to provide participants with a "promo-code" and a direct link to subscribe⁶⁵ (prospects should be allowed to subscribe immediately after they show interest). However, given the market characteristics, and maybe after a deeper and wider study, I would really consider the suggestions provided in the previous chapter ⁶⁶.

⁶² Data analysis needs data.

⁶³ SI 3-months free trial.

⁶⁴ Hypothesis raised by the study.

⁶⁵The number of new clients updated to August 2023 is 0.

⁶⁶ Especially given the market conditions.

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Appendices

Appendix I: Pricing Strategies (Noble & Gruca, 1999)

Strategy	Strategy Description	
New Product Pricing Situation		
Price Skimming	We set the initial price high and then systematically reduce it over time. Customers expect prices to eventually fall.	Premium Pricing, Value-in-Use Pricing
Penetration Pricing	We initially set the price low to accelerate product adoption.	
Experience Curve Pricing	We set the price low to build volume and reduce costs through accumulated experience.	Learning Curve Pricing
Competitive Pricing Situation		
Leader Pricing	We initiate a price change and expect the other firms to follow.	Umbrella Pricing, Cooperative Pricing, Signaling
Parity Pricing	We match the price set by the overall market or the price leader.	Neutral Pricing, Follower Pricing
Low-Price Supplier	We always strive to have the low price in the market.	Parallel Pricing, Adaptive Pricing, Opportunistic Pricing
Product Line Pricing Situation		
Complementary Product Pricing	We price the core product low when complementary items such as accessories, supplies, spare parts, services, etc. can be priced with a higher premium.	Razor-and-Blade Pricing
Price Bundling	We offer this product as part of a bundle of several products, usually at a total price that gives our customers an attractive savings over the sum of individual prices.	System Pricing
Customer Value Pricing	We price one version of our product at very competitive levels, offering fewer features than are available on other versions.	Economy Pricing
Cost-based Pricing Situation		
Cost-Plus Pricing	We establish the price of the product at a point that gives us a specified percentage profit margin over our costs.	Contribution Pricing, Rate-of-Return Pricing, Target Return Pricing, Contingency Pricing, Markup Pricing

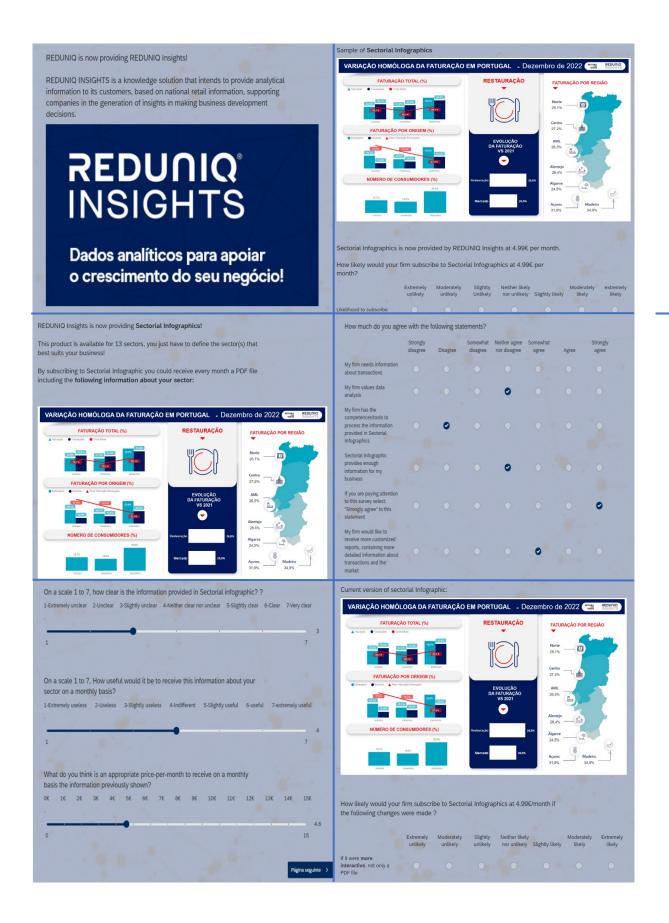
Appendix II.A: Email (REDUNIQ)



Appendix II.B: Survey

Link: <u>https://ucplbusiness.co1.qualtrics.com/jfe/preview/previewId/0b24f6fc-5e76-436b-9faa-0021b18a92de/SV_b2fTbJzmPQHTyHs?Q_CHL=preview&Q_SurveyVersionID=current</u>

REDUNIQ [®] Enhanced Payment Experience	Where did you hear about REDUNIQ Insights? (select all that apply) Media
	REDUNIQ Newsletter
	REDUNIQ Website
Dear REDUNIQ clients,	REDUNIQ Account Manager
as part of a consulting project orchestrated by students at Católica Lisbon School of Business & Economics, this survey aims to asses the current state and improve the services provided by REDUNIQ Insights .	Other, specify where
the services provided by REDONIC Insights .	On a scale 1 to 3, How familiar are you with the services provided by REDUNIQ Insights?
Your company's experience and perspective is important to us!	1-I have never heard about it 2-I have a general idea 3-I have a clear idea Free Reports
The following survey is expected to take about 6 minutes to complete.	1 3 Free Infographics
The survey is anonymous and data collected will be kept strictly confidential. Only aggregated results will be used in any reports on the collected information.	1 3 Costumized Reports
	1 Sectorial Infographics
If you are willing to fill out this survey, please click on the "Next" button below. Thank you.	1 3
When you think of Data Providers, which brands come to mind ? (select all that apply)	How much do you agree with the following statements ?
Pwc	Strongly Somewhat Neither agree Somewhat Strongly disagree Disagree disagree nor disagree agree Agree agree
REDUNIQ	REDUNIQ Insights services positively contribute to the image of REDUNIQ
Mastercard	REDUNIQ Insights provides valuable services
Deloitte	REDUNIQ Insights services of the unique of the services of the
Other, specify which	and the second second
None of the above	Página seguinte 义
*Have you ever heard of REDUNIQ Insights?	*Have you ever heard of REDUNIQ Insights?
INSIGHTS	INCIALTO
	INSIGHTS
	gunne .
Ves No	



If the first three foreign nationalities were specified in the section of Futuração por Origem	What sector does your company operate in? (Select all that apply)
If the average transaction value detailed for every region were provided	Car Accessories & Mechanics
If the day of the week with the higest expenditures were specified	Hairdressers
If all the previously mentioned changes were	Household Appliances & Technology
made Can you think of any specific information that, if it were included in Sectorial	
Infographics, would significantly increase the value of Sectorial infographics your firm?	Hypermarkets & Supermarkets
♥ Yes	Hotels & Tourism
No What type of information would significantly increase the value of Sectoria	Fashion
Infographics to your firm? (optional)	Bookshops & Stationery Stores
suggestion 1	Perfume Shops
	Restaurants
suggestion 2	Traditional Food Retailers
suggestion 3	Healthcare
	Other, please specify
Where is your business located? (Select all that apply)	What is the average annual revenue of your firm?
Açores Aveiro	○ Less than 100.000€
Beja Braga	100.000€ to 500.000€
Bragança Castelo Branco	500.000€ to 1.000.000€
Coimbra	 1.000.000€ to 3.000.000€ More than 3.000.000€
Faro	I prefer not to say
	Bureau
Leiria	How long ago was your firm established? (approximately)
Madeira Porto	less than 5 years ago
Portalegre Santarém	between 5 and 10 years ago
Setùbal Viana do Castelo	between 10 and 20 years ago
Vila Real Viseu	More than 30 years ago
All the mantioned regions	I do not know

Does your company develop analysis in order to make strategic decisions based	Great news !!!
on data?	According to your previous answers, REDUNIQ INSIGHTS might have another service suited to your business!
⊘ Yes	REDUNIQ INSIGHTS is now offering Costumized Reports.
	You can request a fully customized report tailored to your business.
Does your company have a data analysis department?	Tell REDUNIQ INSIGHTS what your needs are and they will create a detailed and
O No	exclusive report on your business.
Ves	If you are interested in receiving more information about the product, contact your account manager !
What are generally the sources of data used for the analysis? (select all that apply)	Sele Counter
self-collected by the firm	
my firm subscibed to a REDUNIO Insights service	
General public data	
My firm subscribed to or has a contract with another data provider. Specify which (Opcional)	CLICK TO ACCI THE REPORT
I do not know	
This is the end of survey!	
We would like to thank you for your participation.	
As a way of rewarding , REDUNIQ is offering you a 3 month free subscription to Sectorial Infographic.	
If you are willing to benefit from the free trial select YES and type the NIF of your company, otherwise select NO.	
If you provide your NIF, REDUNIQ will contact you to activate the product.	
Be aware that providing your NIF is completely voluntary.	
Yes, please type the NIF of your firm	
0 No	
If you Provided your NIF, please select the sector you're interested in	
Car Accessories & Mechanics	
Hairdressers	
Household Appliances & Technology	
Pharmacies	
Gas Stations	
Hypermarkets & Supermarkets	
Hotels & Tourism	
Fashion	
Bookshops & Stationery Stores	
Perfume Shops	
Restaurants	
Traditional Food Retailers	
Healthcare	
· · · · · · · · · · · · · · · · · · ·	

Appedix III.A: Participants breakout by Demographics

		Sector	tot		
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Car Accessories & Mechanics	3	1,8	1,8	1,8
	Hairdressers	2	1,2	1,2	2,9
	Household Appliances & Technology	4	2,4	2,4	5,3
	Pharmacies	9	5,3	5,3	10,6
	Gas Stations	4	2,4	2,4	12,9
	Hypermarkets & Supermarkets	3	1,8	1,8	14,7
	Hotels & Tourism	36	21,2	21,2	35,9
	Fashion	12	7,1	7,1	42,9
	Bookshops & Stationery Stores	6	3,5	3,5	46,5
	Perfume Shops	1	,6	,6	47,1
	Restaurants	31	18,2	18,2	65,3
	Traditional Food Retailers	8	4,7	4,7	70,0
	Healthcare	10	5,9	5,9	75,9
	Other	41	24,1	24,1	100,0
	Total	170	100,0	100,0	

Annual revenue category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Prefiro não dizer	20	13,3	13,3	13,3
	Menos de 100.000€	37	24,7	24,7	38,0
	100.000€ a 500.000€	52	34,7	34,7	72,7
	500.000€ a 1.000.000€	15	10,0	10,0	82,7
	1.000.000€ a 3.000.000€	13	8,7	8,7	91,3
	Mais de 3.000.000€	13	8,7	8,7	100,0
	Total	150	100,0	100,0	

Age intervals

		Frequency	Percent	Valid Percent	Percent
Valid	Menos de 5 anos	36	24,0	24,2	24,2
	5 a 10 anos	24	16,0	16,1	40,3
	10 a 20 anos	27	18,0	18,1	58,4
	20 a 30 anos	25	16,7	16,8	75,2
	Mais de 30 anos	37	24,7	24,8	100,0
	Total	149	99,3	100,0	
Missing	Não sei	1	,7		
Total		150	100,0		

Location_gruped							
		Frequency	Percent	Valid Percent	Cumulative Percent		
Valid	north	42	28,0	28,0	28,0		
	islands	12	8,0	8,0	36,0		
	center	20	13,3	13,3	49,3		
	south	76	50,7	50,7	100,0		
	Total	150	100,0	100,0			

Appendix III.B: Brand Knowledge

	Statistics							
		PWC brand comes to mind	REDUNIQ brand comes to mind	SIBS brand comes to mind	Mastercard brand comes to mind	INE brand comes to mind	Deloitte brand comes to mind	other comes to mind
Ν	Valid	16	63	63	41	81	26	7
	Missing	134	87	87	109	69	124	143

Frequency Table

PWC brand comes to mind

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PWC	16	10,7	100,0	100,0
Missing	System	134	89,3		
Total		150	100,0		

REDUNIQ brand comes to mind

		Frequency	Percent	Valid Percent	Percent
Valid	REDUNIQ	63	42,0	100,0	100,0
Missing	System	87	58,0		
Total		150	100,0		

SIBS brand comes to mind

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SIBS	63	42,0	100,0	100,0
Missing	System	87	58,0		
Total		150	100,0		

Mastercard brand comes to mind

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mastercard	41	27,3	100,0	100,0
Missing	System	109	72,7		
Total		150	100,0		

INE brand comes to mind										
		Frequency	Percent	Valid Percent	Cumulative Percent					
Valid	INE	81	54,0	100,0	100,0					
Missing	System	69	46,0							
Total		150	100,0							

Deloitte brand comes to mind

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Deloitte	26	17,3	100,0	100,0
Missing	System	124	82,7		
Total		150	100,0		

other comes to mind

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	other	7	4,7	100,0	100,0
Missing	System	143	95,3		
Total		150	100,0		

Appendix III.C: Friedman's non-parametric test

Nonparametric Tests

	Hypothesis Test Summary										
	Null Hypothesis	Test	Sig. ^{a,b}	Decision							
1	The distributions of Familiarity free report, Familiarity free infographics, Familiarity costumized report and Familiarity sectorial infographics are the same.	Related-Samples Friedman's Two-Way Analysis of Variance by Ranks	,313	Retain the null hypothesis.							
a. T	he significance level is ,050.										

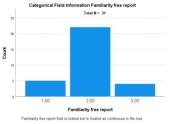
b. Asymptotic significance is displayed

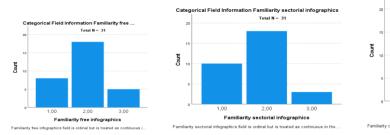
Related-Samples Friedman's Two-Way Analysis of Variance by Ranks

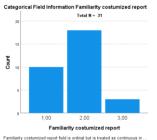
Familiarity free report, Familiarity free infographics, Familiarity costumized report, Familiarity sectorial infographics

Related-Samples Friedman's Two-Way Analysis of Variance by Ranks Summary

,	,,
Total N	31
Test Statistic	3,558ª
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	,313
a. Multiple comparison: because the overall t hypothesis of no diffe	est retained the null







Appendix III.D: Brand Associations & Image

Descriptive Statistics										
	Ν	Minimum	Maximum	Mean	Std. Deviation					
REDUNIQ INSIGHTS services affects positively the image of REDUNIQ	31	4	7	5,39	1,202					
REDUNIQ INSIGHTS provides valuable services	31	4	7	5,10	1,044					
REDUNIQ INSIGHTS services are unique	31	3	7	4,48	,890					
Usefulness of information provided	150	1,00	7,00	5,2400	1,51803					
Valid N (listwise)	31									

Appendix III.E: Product Characteristics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skew	ness
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Clearness of information provided	150	1,00	7,00	5,4533	1,16196	-1,056	,198
Valid N (listwise)	150						

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skew	ness
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Usefulness of information provided	150	1,00	7,00	5,2400	1,51803	-,986	,198
Valid N (listwise)	150						

Appendix III.F: One way ANOVA implementation Usefulness - Revenue classes

Usefulness of information provided

Descriptives

					95% Confider Me	ice Interval for an		
	Ν	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Prefiro não dizer	20	5,0500	1,98614	,44411	4,1205	5,9795	1,00	7,00
Menos de 100.000€	37	5,2162	1,45555	,23929	4,7309	5,7015	2,00	7,00
100.000€ a 500.000€	52	5,2885	1,43262	,19867	4,8896	5,6873	1,00	7,00
500.000€ a 1.000.000€	15	5,5333	1,35576	,35006	4,7825	6,2841	2,00	7,00
1.000.000€ a 3.000.000€	13	5,2308	1,58923	,44077	4,2704	6,1911	2,00	7,00
Mais de 3.000.000€	13	5,0769	1,55250	,43059	4,1388	6,0151	2,00	7,00
Total	150	5,2400	1,51803	,12395	4,9951	5,4849	1,00	7,00

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
	Based on Mean	1,397	5	144	,229
information provided	Based on Median	,871	5	144	,502
	Based on Median and with adjusted df	,871	5	136,783	,502
	Based on trimmed mean	1,427	5	144	,218

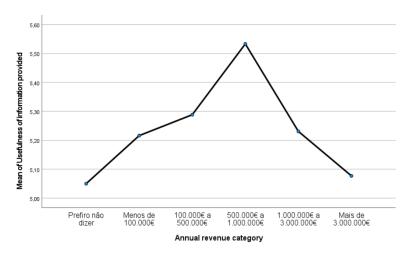


Robust Tests of Equality of Means

	Statistic ^a	df1	df2	Sig.
Welch	,202	5	44,214	,960
Brown-Forsythe	,200	5	88.839	.962

LSD		Mean			95% Confid	ence Interval
(I) Annual revenue category	(J) Annual revenue category	Difference (I- J)	Std. Error	Sig.	Lower Bound	Upper Bour
Prefiro não dizer	Menos de 100.000€	-,16622	,42700	,698	-1,0102	,677
	100.000€ a 500.000€	-,23846	,40481	,557	-1,0386	,561
	500.000€ a 1.000.000€	-,48333	,52551	,359	-1,5220	,555
	1.000.000€ a 3.000.000€	-,18077	,54812	,742	-1,2642	,902
	Mais de 3.000.000€	-,02692	,54812	,961	-1,1103	1,056
Menos de 100.000€	Prefiro não dizer	,16622	,42700	,698	-,6778	1,010
	100.000€ a 500.000€	-,07225	,33090	,827	-,7263	,581
	500.000€ a 1.000.000€	-,31712	,47093	,502	-1,2480	,613
	1.000.000€ a 3.000.000€	-,01455	,49604	,977	-,9950	,965
	Mais de 3.000.000€	,13929	,49604	,779	-,8412	1,119
100.000€ a 500.000€	Prefiro não dizer	,23846	,40481	,557	-,5617	1,038
100.000€ a 500.000€	Menos de 100.000€	,07225	,33090	,827	-,5818	,726
	500.000€ a 1.000.000€	-,24487	,45092	,588	-1,1361	,646
	1.000.000€ a 3.000.000€	,05769	,47708	,904	-,8853	1,000
	Mais de 3.000.000€	,21154	,47708	,658	-,7314	1,154
500.000€ a 1.000.000€	Prefiro não dizer	,48333	,52551	,359	-,5554	1,522
	Menos de 100.000€	,31712	,47093	,502	-,6137	1,248
	100.000€ a 500.000€	,24487	,45092	,588	-,6464	1,136
	1.000.000€ a 3.000.000€	,30256	,58300	,605	-,8498	1,454
	Mais de 3.000.000€	,45641	,58300	,435	-,6959	1,608
1.000.000€ a 3.000.000€	Prefiro não dizer	,18077	,54812	,742	-,9026	1,264
	Menos de 100.000€	,01455	,49604	,977	-,9659	,995
	100.000€ a 500.000€	-,05769	,47708	,904	-1,0007	,88
	500.000€ a 1.000.000€	-,30256	,58300	,605	-1,4549	,849
	Mais de 3.000.000€	,15385	,60346	,799	-1,0389	1,346
Mais de 3.000.000€	Prefiro não dizer	,02692	,54812	,961	-1,0565	1,110
	Menos de 100.000€	-,13929	,49604	,779	-1,1198	,841
	100.000€ a 500.000€	-,21154	,47708	,658	-1,1545	,731
	100.000€ a 500.000€	-,21154	,47708	,658	-1,1545	,73
	500.000€ a 1.000.000€	-,45641	,58300	,435	-1,6087	,69
	1.000.000€ a 3.000.000€	-,15385	.60346	.799	-1,3466	1.038

Means Plots



Appendix III.G: One way ANOVA implementation Usefulness - Age of the firm

					95% Confidence Interval for Mean			
	Ν	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Menos de 5 anos	36	5,5000	1,25357	,20893	5,0759	5,9241	3,00	7,00
5 a 10 anos	24	5,5833	1,24819	,25479	5,0563	6,1104	3,00	7,00
10 a 20 anos	27	5,1852	1,56984	,30212	4,5642	5,8062	2,00	7,00
20 a 30 anos	25	5,1600	1,62481	,32496	4,4893	5,8307	1,00	7,00
Mais de 30 anos	37	4,8378	1,77190	,29130	4,2471	5,4286	1,00	7,00
Total	149	5,2349	1,52186	,12468	4,9885	5,4813	1,00	7,00

Descriptives

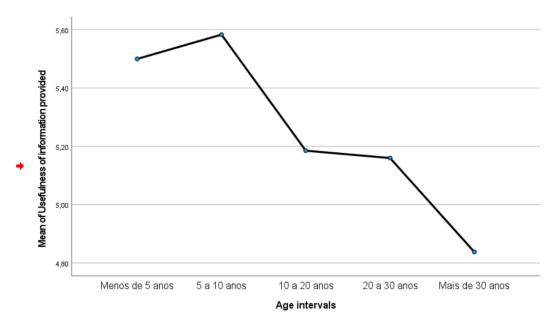
Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Usefulness of	Based on Mean	1,640	4	144	,167
information provided	Based on Median	,713	4	144	,584
	Based on Median and with adjusted df	,713	4	116,215	,584
	Based on trimmed mean	1,476	4	144	,212

ANOVA

Usefulness of Infor	mation provided				
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11,484	4	2,871	1,248	,293
Within Groups	331,294	144	2,301		
Total	342,779	148			

Means Plots



Appendix III.H.1: One way ANOVA implementation Usefulness - Sector

Descriptives

					95% Confider Me	ice Interval for an		
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Car Accessories & Mechanics	3	3,6667	2,51661	1,45297	-2,5849	9,9183	1,00	6,00
Hairdressers	2	5,5000	2,12132	1,50000	-13,5593	24,5593	4,00	7,00
Household Appliances & Technology	4	6,0000	,00000,	,00000,	6,0000	6,0000	6,00	6,00
Pharmacies	9	4,3333	2,23607	,74536	2,6145	6,0521	1,00	7,00
Gas Stations	4	4,7500	1,89297	,94648	1,7379	7,7621	2,00	6,00
Hypermarkets & Supermarkets	3	6,3333	,57735	,33333	4,8991	7,7676	6,00	7,00
Hotels & Tourism	36	5,5556	1,13249	,18875	5,1724	5,9387	3,00	7,00
Fashion	12	4,7500	1,91288	,55220	3,5346	5,9654	2,00	7,00
Bookshops & Stationery Stores	6	5,3333	2,42212	,98883	2,7915	7,8752	1,00	7,00
Perfume Shops	1	6,0000					6,00	6,00
Restaurants	31	5,6452	1,37957	,24778	5,1391	6,1512	2,00	7,00
Traditional Food Retailers	8	4,6250	1,18773	,41993	3,6320	5,6180	3,00	6,00
Healthcare	10	5,6000	1,07497	,33993	4,8310	6,3690	4,00	7,00
Other	41	5,2927	1,45334	,22697	4,8340	5,7514	2,00	7,00
Total	170	5,3118	1,50439	,11538	5,0840	5,5395	1,00	7,00

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Usefulness of	Based on Mean	2,972	12	156	<,001
information provided	Based on Median	1,392	12	156	,175
	Based on Median and with adjusted df	1,392	12	107,336	,181
	Based on trimmed mean	2,704	12	156	,002

ANOVA

Usefulness of inform	mation provided				
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	37,561	13	2,889	1,307	,214
Within Groups	344,915	156	2,211		
Total	382,476	169			

Robust Tests of Equality of Means^b

Usefulness of information provided

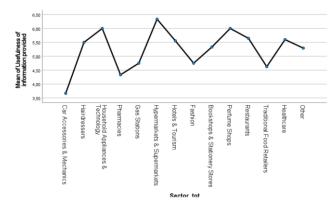


Brown-Forsythe

a. Asymptotically F distributed.

B. Robust tests of equality of means cannot be performed for Usefulness of information provided because at least one group has the sum of case weights less than or equal to 1.

Means Plots



Appendix III.H.2: Shapiro-Wilk test Usefulness - Sector

	Te	sts of Norma	lity ^c				
		Kolmo	gorov-Smirr	nov ^a	s	hapiro-Wilk	
	Sector_tot	Statistic	df	Sig.	Statistic	df	Sig.
Usefulness of information provided	acessorios de automoveis e officinas	,219	3		,987	3	,780
	cabeleiros	,260	2				
	electrodomesticos e tecnologia		4			4	
	farmacias	,216	9	,200	,882	9	,163
	gasolineiras	,303	4		,791	4	,086
	Hipermercados e supermercados	,385	3		,750	3	,000
	hoteleria e turismo	,188	36	,002	,889	36	,002
	moda	,243	12	,048	,856	12	,044
	papelarias a livrarias	,275	6	,175	,782	6	,040
	restauracao	,247	31	<,001	,853	31	<,001
	rettalho alimentar traditional	,326	8	,013	,793	8	,024
	saude	,245	10	,090	,892	10	,177
	outra	,297	41	<,001	,851	41	<,001

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

c. Usefulness of information provided is constant when Sector_tot = perfumarias. It has been omitted.

Appendix III.H.3: Independent-samples Kruskal-Wallis test Usefulness – Sector

			Hypothesi	s Test Summary			
	Null Hypothes	sis		Test	Sig. ^{a,b}	Decision	
1	The distribution of Use information provided is across categories of S	s the same	Independent-S Wallis Test	dent-Samples Kruskal- ,46 est		Retain the null hypoth	nesis
a. 1	The significance level is ,(050.					
b.A	Asymptotic significance is	displayed.					
ndep	endent-Samples Kr	uskal-Wall	lis Test				
Usefu	Iness of information	n provideo	d across Sect	tor_tot			
Ind	dependent-Samples Test Sumn		Wallis				
Total I			170				
	Statistic		12,836 ^{a,b}				
	ee Of Freedom		13				
Asymp test)	ptotic Sig.(2-sided		,461				
b.N	The test statistic is adjust Multiple comparisons are because the overall test d significant differences acr	not performe	N				
b.N	Multiple comparisons are because the overall test d	not performe	N	Continuous F	ield Informatio	on Usefulness of info	orm
b. M k s	Multiple comparisons are because the overall test d significant differences acr	not performa oes not sho oss sample:	N S.	Continuous F		rided	orm
b. M k s	Multiple comparisons are because the overall test d	not performa oes not sho oss sample:	N S.	Continuous F		rided N = 170 Min = 1.00	orm
b. M k s	Multiple comparisons are because the overall test d significant differences acr	not performa oes not sho oss sample:	N S.	Continuous F		vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm
b. M k s	Multiple comparisons are because the overall test d significant differences acr	not performa oes not sho oss sample:	N S.	Continuous F		rided N = 170 Min = 1.00	orm
b. M k s Inde 7,00	Multiple comparisons are because the overall test d significant differences acr	not performa oes not sho oss sample:	N S.			vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm
b. M k s Inde 7,00	Multiple comparisons are because the overall test d significant differences acr	not performa oes not sho oss sample:	N S.			vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm
b. h k s 7,00 6,00 5,00	Multiple comparisons are because the overall test d significant differences acr	not performa oes not sho oss sample:	N S.	60		vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm
b. h k s 7,00 5,00 4,00 3,00	Multiple comparisons are because the overall test d significant differences acr	not performa oes not sho oss sample:	N S.	60		vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm
b. h k s 7,00 6,00 5,00 3,00 2,00	Multiple comparisons are because the overall test d significant differences acr	not performa oes not sho oss sample:	N S.	60		vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm
b. h k s 7,00 5,00 4,00 3,00	Multiple comparisons are because the overall test d significant differences acr	not perform oes not sho oss sample uskal-Wallis	» Test	60 ······		vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm
b. h k s 7,00 6,00 5,00 3,00 2,00	Multiple comparisons are because the overall test d significant differences acr	not perform oes not sho oss sample uskal-Wallis	» Test	60 40 Hedneuch		vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm
b. h k s 7,00 6,00 5,00 3,00 2,00	Multiple comparisons are because the overall test d significant differences acr	not perform oes not sho oss sample uskal-Wallis	» Test	60		vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm
b. h k s 7,00 6,00 5,00 3,00 2,00	Multiple comparisons are because the overall test d significant differences acr	not perform oes not sho oss sample uskal-Wallis	» Test	60 40 Hedneuch		vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm
b. h k s 7,00 6,00 5,00 3,00 2,00	Multiple comparisons are because the overall test d significant differences acr	not performa ces not shou oss sample:	» Test	60 40 Hedneuch		vided N = 170 Min = 1,00 Max = 7,00 Mean = 5,312	orm

Sector_tot

Appendix III.H.3: Linear regression stepwise Usefulness - Sector dummy variables

No variables were entered i	nto the equa	tion	
NU Vallables were entered i	nto the equa	luon.	
Descr	iptive Sta	tistics	
	Mean	Std. Deviation	Ν
Usefulness of information provided	5,2400	1,51803	150
Car Accessories & Mechanics	,02	,140	150
Hairdressers	,01	,115	150
Household Appliances & Technology	,03	,162	150
Pharmacies	,06	,238	150
Gas Stations	,03	,162	150
Hypermarkets & Supermarkets	,02	,140	150
Hotels & Tourism	,24	,429	150
Fashon	,08	,272	150
Bookshops & Stationery Stores	,04	,197	150
Perfume Shops	,01	,082	150
Restaurants	,21	,406	150
Traditional Food Retailers	,05	,225	150
Healthcare	,07	,250	150
Other	.27	.447	150

Appendix III.H.4: Linear regression Enter Usefulness - Sector dummy variables.

Model Summary ^b								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson			
1	,346 ^a	,120	,029	1,49623	1,752			
Нур	ermarkets	& Supermarke		iances & Technol ies & Mechanics,	Perfume			

b. Dependent Variable: Usefulness of information provided

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41,137	14	2,938	1,313	,208 ^b
	Residual	302,223	135	2,239		
	Total	343,360	149			

a. Dependent Variable: Usefulness of information provided

b. Predictors: (Constant), Other, Household Appliances & Technology, Hypermarkets & Supermarkets, Car Accessories & Mechanics, Perfume Shops, Bookshops & Stationery Stores, Hairdressers, Traditional Food Retailers, Pharmacies, Fashon, Healthcare, Gas Stations, Restaurants, Hotels & Tourism

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	Ν
Predicted Value	3,4844	7,6260	5,2400	,52544	150
Residual	-4,25801	2,44700	,00000,	1,42420	150
Std. Predicted Value	-3,341	4,541	,000,	1,000	150
Std. Residual	-2,846	1,635	,000	,952	150

a. Dependent Variable: Usefulness of information provided

Appendix III.H.5: Linear regression Enter Usefulness - Sectors dummy variables (Restaurant-Hotel & tourism).

Descriptive Statistics								
	Mean	Std. Deviation	Ν					
Usefulness of information provided	5,2400	1,51803	150					
Sector Hotelaria e Turismo	,24	,429	150					
Sector Restauração	,21	,406	150					

			M	odel Summary	þ	
1	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	1	,189 ^a	,036	,023	1,50076	1,768
	a. Pre	edictors: (Co	nstant), Secto	or Restauração, S	ector Hotelaria e T	urismo

b. Dependent Variable: Usefulness of information provided

ANOVA	J
-------	---

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12,275	2	6,137	2,725	,069 ^b
	Residual	331,085	147	2,252		
	Total	343,360	149			

a. Dependent Variable: Usefulness of information provided

b. Predictors: (Constant), Sector Restauração, Sector Hotelaria e Turismo

		Usefulness of information provided	Sector Hotelaria e Turismo	Sector Restauração
Pearson Correlation	Usefulness of information provided	1,000	,117	,137
	Sector Hotelaria e Turismo	,117	1,000	-,094
	Sector Restauração	,137	-,094	1,000
Sig. (1-tailed)	Usefulness of information provided		,077	,048
	Sector Hotelaria e Turismo	,077		,126
	Sector Restauração	,048	,126	
Ν	Usefulness of information provided	150	150	150
	Sector Hotelaria e Turismo	150	150	150
	Sector Restauração	150	150	150

Correlations

Coefficients^a

		Unstandardize	d Coefficients	Standardized Coefficients			Collinearity	Statistics
Model		в	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	5,013	,157		31,988	<,001		
	Sector Hotelaria e Turismo	,465	,288	,131	1,613	,109	,991	1,009
	Sector Restauração	,557	,304	,149	1,832	,069	,991	1,009

a. Dependent Variable: Usefulness of information provided

Collinearity Diagnostics^a

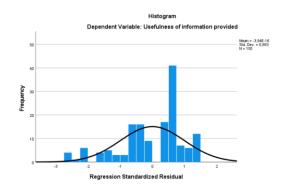
					Variance Proportio	ons
Model	Dimension	Eigenvalue	Condition Index	(Constant)	Sector Hotelaria e Turismo	Sector Restauração
1	1	1,747	1,000	,16	,13	,12
	2	,851	1,433	,00,	,41	,50
	3	,402	2,085	,84	,47	,38

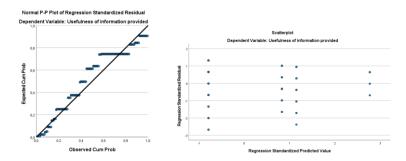
a. Dependent Variable: Usefulness of information provided

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	Ν
Predicted Value	5,0134	6,0350	5,2400	,28702	150
Residual	-4,01335	1,98665	,00000,	1,49065	150
Std. Predicted Value	-,790	2,770	,000,	1,000	150
Std. Residual	-2,674	1,324	,000,	,993	150

a. Dependent Variable: Usefulness of information provided



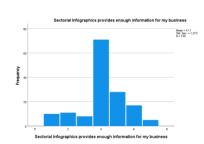


Appendix III.I: Descriptive statistics - SI provide enough information.

	Descriptive Statistics											
	Ν	Minimum	Maximum	Mean	Std. Deviation	Variance	Skew	ness				
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error				
Sectorial Infographics provides enough information for my business	150	1	7	4,11	1,373	1,886	-,427	,198				
Valid N (listwise)	150											

Sectorial Infographics provides enough information for my business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	10	6,7	6,7	6,7
	disagree	11	7,3	7,3	14,0
	somewhat disagree	8	5,3	5,3	19,3
	neither agree nor disagree	71	47,3	47,3	66,7
	somewhat agree	28	18,7	18,7	85,3
	agree	17	11,3	11,3	96,7
	strongly agree	5	3,3	3,3	100,0
	Total	150	100,0	100,0	



Appendix III.I.1 One way ANOVA "SI provide enough information" - Revenue classes.

			Desc	riptives				
Sectorial Infographics provid	les enough	information	for my business					
					95% Confider Me	ice Interval for an		
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Prefiro não dizer	20	4,40	1,930	,432	3,50	5,30	1	7
Menos de 100.000€	37	3,92	1,422	,234	3,44	4,39	1	6
100.000€ a 500.000€	52	4,06	1,145	,159	3,74	4,38	1	7
500.000€ a 1.000.000€	15	4,40	1,682	,434	3,47	5,33	1	7
1.000.000€ a 3.000.000€	13	3,92	1,188	,329	3,21	4,64	2	6
Mais de 3.000.000€	13	4,31	,855	,237	3,79	4,82	3	6
Total	150	4,11	1,373	,112	3,89	4,33	1	7

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Sectorial Infographics provides enough information for my business	Based on Mean	2,861	5	144	,017
	Based on Median	2,433	5	144	,038
	Based on Median and with adjusted df	2,433	5	130,440	,038
	Based on trimmed mean	2.835	5	144	.018

ANOVA

Sectorial Infographi	cs provides enoug	h informati	on for my busines:	5	
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5,397	5	1,079	,564	,728
Within Groups	275,676	144	1,914		
Total	281,073	149			

Robust Tests of Equality of Means

Sectorial Infographics provides enough information for my business

	Statistic ^a	df1	df2	Sig.			
Welch	,507	5	45,085	,769			
Brown-Forsythe	,534	5	80,727	,750			
a. Asymptotically F distributed.							

Appendix III.I.2: One way ANOVA "SI provide enough information for my business" – Sector.

			Desc	riptives				
Sectorial Infographics provid	les enough information for my business 95% Confidence			nce Interval for ean				
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Car Accessories & Mechanics	3	3,00	1,732	1,000	-1,30	7,30	1	4
Hairdressers	2	4,00	,000	,000	4,00	4,00	4	4
Household Appliances & Technology	4	4,50	1,000	,500	2,91	6,09	4	6
Pharmacies	9	4,33	2,236	,745	2,61	6,05	1	7
Gas Stations	4	2,75	1,258	,629	,75	4,75	1	4
Hypermarkets & Supermarkets	3	4,33	,577	,333	2,90	5,77	4	5
Hotels & Tourism	36	3,94	1,351	,225	3,49	4,40	1	6
Fashion	12	3,67	1,231	,355	2,88	4,45	2	6
Bookshops & Stationery Stores	6	5,17	1,329	,543	3,77	6,56	4	7
Perfume Shops	1	4,00					4	4
Restaurants	31	4,45	1,387	,249	3,94	4,96	1	7
Traditional Food Retailers	8	4,00	,535	,189	3,55	4,45	3	5
Healthcare	10	4,10	1,101	,348	3,31	4,89	2	6
Other	41	4,22	1,275	,199	3,82	4,62	1	7
Total	170	4.14	1.345	.103	3,93	4.34	1	7

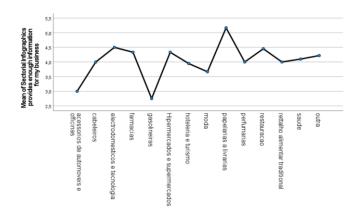
Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Sectorial Infographics	Based on Mean	1,467	12	156	,142
provides enough information for my	Based on Median	1,157	12	156	,319
business	Based on Median and with adjusted df	1,157	12	133,182	,321
	Based on trimmed mean	1,471	12	156	,141

		ANOVA			
Sectorial Infographic	cs provides enoug	h informati	on for my busines	s	
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	26,481	13	2,037	1,137	,332
Within Groups	279,407	156	1,791		
Total	305,888	169			

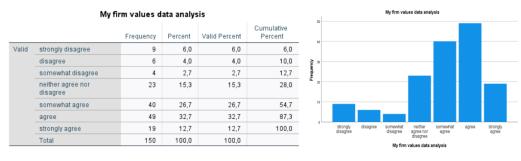
		Point	95% Confidence Interval		
		Estimate	Lower	Upper	
Sectorial Infographics	Eta-squared	,087	,000,	,102	
provides enough information for my	Epsilon-squared	,010	-,083	,027	
business	Omega-squared Fixed- effect	,010	-,083	,027	
	Omega-squared Random-effect	,001	-,006	,002	

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model. b. Negative but less biased estimates are retained, not rounded to zero.



Appendix III.L: Psychographics & Characteristics

	Descriptive Statistics					
	Ν	Minimum	Maximum	Mean	Std. Deviation	
My firm values data analysis	150	1	7	5,01	1,559	
Valid N (listwise)	150					

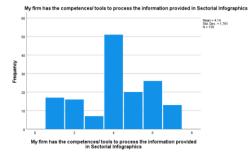


My firm needs information about transactions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	14	9,3	9,3	9,3
	disagree	21	14,0	14,0	23,3
	somewhat disgree	11	7,3	7,3	30,7
	neither agree nor disagree	43	28,7	28,7	59,3
	somewhat agree	25	16,7	16,7	76,0
	agree	26	17,3	17,3	93,3
	strongly agree	10	6,7	6,7	100,0
	Total	150	100,0	100,0	

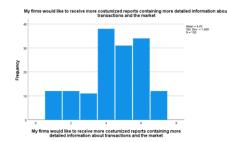
My firm has the competences/ tools to process the information provided in Sectorial Infographics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	17	11,3	11,3	11,3
	disagree	16	10,7	10,7	22,0
	somewhat disagree	7	4,7	4,7	26,7
	neither agree nor disagree	51	34,0	34,0	60,7
	somewhat agree	20	13,3	13,3	74,0
	agree	26	17,3	17,3	91,3
	strongly agree	13	8,7	8,7	100,0
	Total	150	100,0	100,0	



My firms would like to receive more costumized reports containing more detailed information about transactions and the market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	12	8,0	8,0	8,0
	disagree	12	8,0	8,0	16,0
	somewhat disagree	11	7,3	7,3	23,3
	neither agree nor disagree	38	25,3	25,3	48,7
	somewhat agree	31	20,7	20,7	69,3
	agree	34	22,7	22,7	92,0
	strongly agree	12	8,0	8,0	100,0
	Total	150	100,0	100,0	



Appendix III.L.1: Customized Reports - Revenue classes

Descriptives

My firms would like to receive more costumized reports containing more detailed information about transactions and the market

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Prefiro não dizer	20	4,70	1,689	,378	3,91	5,49	1	7
Menos de 100.000€	37	4,19	1,729	,284	3,61	4,77	1	7
100.000€ a 500.000€	52	4,56	1,577	,219	4,12	5,00	1	7
500.000€ a 1.000.000€	15	4,33	1,952	,504	3,25	5,41	1	6
1.000.000€ a 3.000.000€	13	3,77	1,423	,395	2,91	4,63	2	7
Mais de 3.000.000€	13	4,92	1,706	,473	3,89	5,95	2	7
Total	150	4,43	1,668	,136	4,16	4,70	1	7

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
My firms would like to	Based on Mean	,570	5	144	,723
receive more costumized reports containing more	Based on Median	,415	5	144	,838
detailed information about transactions and the market	Based on Median and with adjusted df	,415	5	135,529	,838
the market	Based on trimmed mean	,512	5	144	,767

ANOVA

My firms would like to receive more costumized reports containing more detailed information about transactions and the market

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13,427	5	2,685	,964	,442
Within Groups	401,267	144	2,787		
Total	414,693	149			

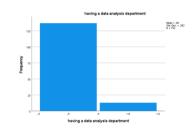
Robust Tests of Equality of Means

My firms would like to receive more costumized reports containing more detailed information about transactions and the market

	Statistic*	df1	df2	Sig.			
Welch	1,035	5	44,637	,409			
a. Asymptotically F distributed.							

Appendix III.M: Characteristics

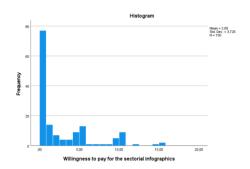
having a data analysis department						
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	No	137	91,3	91,3	91,3	
	yes	13	8,7	8,7	100,0	
	Total	150	100,0	100,0		



Implement data anyalisis x decisons

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	75	50,0	50,0	50,0
	yes	75	50,0	50,0	100,0
	Total	150	100,0	100,0	

Appendix III.N: Perceived value/ WTP



Statistics

Willingness to pay for the sectorial infographics

N	Valid	150
	Missing	0
Mean		2,5980
Median		,1500
Mode		,00,
Std. Devia	3,72597	
Skewness	1,489	
Std. Error	,198	

Willingness to pay for the sectorial infographics

		less to pay	for the se	ectoriai intogr	apriles
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00,	71	47,3	47,3	47,3
	,10	4	2,7	2,7	50,0
	,20	1	,7	,7	50,7
	,50	1	,7	,7	51,3
	,90	3	2,0	2,0	53,3
	1,00	6	4,0	4,0	57,3
	1,10	1	,7	,7	58,0
	1,20	1	,7	,7	58,7
	1,30	2	1,3	1,3	60,0
	1,50	1	,7	,7	60,7
	1,90	5	3,3	3,3	64,0
	2,00	2	1,3	1,3	65,3
	2,50	3	2,0	2,0	67,3
	2,70	1	,7	,7	68,0
	3,50	1	,7	,7	68,7
	3,90	1	,7	,7	69,3
	4,00	2	1,3	1,3	70,7
	4,70	1	,7	,7	71,3
	4,80	1	,7	,7	72,0
	4,90	7	4,7	4,7	76,7
	5,00	11	7,3	7,3	84,0
	5,10	1	,7	,7	84,7
	5,50	1	,7	,7	85,3
	5,90	1	,7	,7	86,0
	6,90	1	,7	,7	86,7
	8,20	1	,7	,7	87,3
	8,70	1	,7	,7	88,0
	9,40	1	,7	,7	88,7
	9,50	1	,7	,7	89,3
	9,50	1	,7	,7	89,3
	9,90	3	2,0	2,0	91,3
	10,00	7	4,7	4,7	96,0
	10,10	2	1,3	1,3	97,3
	11,70	1	,7	,7	98,0
	14,80	1	,7	,7	98,7
	15,00	2	1,3	1,3	100,0
	Total	150	100,0	100,0	

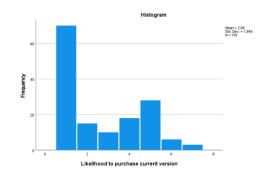
Appendix III.O: Likelihood to Purchase

Statistics

Likelihood to purchase current version					
N	Valid	150			
	Missing	0			
Mean	Mean				
Median		2,00			
Mode	Mode				
Std. Devi	Std. Deviation				
Skewnes	,588				
Std. Erro	,198				

Likelihood to purchase current version

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremamente Improvável	70	46,7	46,7	46,7
	Moderadamente Improvável	15	10,0	10,0	56,7
	Ligeiramente Improvável	10	6,7	6,7	63,3
	Nem provável nem improvável	18	12,0	12,0	75,3
	Ligeiramente Provável	28	18,7	18,7	94,0
	Moderadamente Provável	6	4,0	4,0	98,0
	Extremamente Provável	3	2,0	2,0	100,0
	Total	150	100,0	100,0	



Appendix III.O.1: One- way ANOVA LTP- Location

Likelihood to purchase current version						

95% Confidence Interval for Mean Mean Lower Bound Upper Bound Ν Std. Deviation Std. Error Minimum Maximum north 42 2,67 1,776 ,274 2,11 3,22 1 6 2,33 2,015 islands 12 ,582 1,05 3,61 1 6 center 20 2,85 1,872 ,418 1,97 3,73 1 6 south 76 2,66 1,887 ,216 2,23 3,09 1 7 7 150 1,849 ,151 2,96 1 Total 2,66 2,36

Descriptives

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Likelihood to purchase	Based on Mean	,184	3	146	,907
current version	Based on Median	,309	3	146	,819
	Based on Median and with adjusted df	,309	3	108,351	,819
	Based on trimmed mean	,157	3	146	,925

ANOVA

Likelihood to purchase current version

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2,005	3	,668	,192	,902
Within Groups	507,655	146	3,477		
Total	509,660	149			

Appendix III.O.2: One- way ANOVA LTP- Revenue Classes

Descriptives

Likelihood to purchase current version

					95% Confider Me	ice Interval for an		
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Prefiro não dizer	20	2,40	2,113	,472	1,41	3,39	1	7
Menos de 100.000€	37	2,78	1,858	,305	2,16	3,40	1	7
100.000€ a 500.000€	52	2,65	1,725	,239	2,17	3,13	1	6
500.000€ a 1.000.000€	15	3,27	1,831	,473	2,25	4,28	1	6
1.000.000€ a 3.000.000€	13	2,00	1,780	,494	,92	3,08	1	6
Mais de 3.000.000€	13	2,69	2,057	,570	1,45	3,94	1	7
Total	150	2,66	1,849	,151	2,36	2,96	1	7

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Likelihood to purchase	Based on Mean	,651	5	144	,661
current version	Based on Median	,597	5	144	,702
	Based on Median and with adjusted df	,597	5	90,243	,702
	Based on trimmed mean	,602	5	144	,699

ANOVA

Likelihood to purch	ase current versio	n			
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13,118	5	2,624	,761	,579
Within Groups	496,542	144	3,448		
Total	509,660	149			

Appendix III.O.3: One- way ANOVA LTP- Sector

Warnings

Post hoc tests are not performed for Likelihood to purchase current version because at least one group has fewer than two cases.

Descriptives

Likelihood to purchase curre	entversion							
					95% Confiden Me	ice Interval for an		
	Ν	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Car Accessories & Mechanics	3	1,33	,577	,333	-,10	2,77	1	2
Hairdressers	2	1,00	,000	,000	1,00	1,00	1	1
Household Appliances & Technology	4	2,25	2,500	1,250	-1,73	6,23	1	6
Pharmacies	9	1,89	1,764	,588	,53	3,24	1	5
Gas Stations	4	1,25	,500	,250	,45	2,05	1	2
Hypermarkets & Supermarkets	3	4,00	2,646	1,528	-2,57	10,57	2	7
Hotels & Tourism	36	3,03	1,978	,330	2,36	3,70	1	7
Fashion	12	3,08	1,621	,468	2,05	4,11	1	5
Bookshops & Stationery Stores	6	3,83	2,137	,872	1,59	6,08	1	7
Perfume Shops	1	1,00					1	1
Restaurants	31	3,32	1,922	,345	2,62	4,03	1	7
Traditional Food Retailers	8	3,13	1,553	,549	1,83	4,42	1	5
Healthcare	10	2,40	1,713	,542	1,17	3,63	1	5
Other	41	2,29	1,914	,299	1,69	2,90	1	7
Total	170	2,74	1,911	,147	2,45	3,02	1	7

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Likelihood to purchase current version	Based on Mean	2,138	12	156	,017
current version	Based on Median	1,104	12	156	,361
	Based on Median and with adjusted df	1,104	12	96,687	,366
	Based on trimmed mean	1,911	12	156	,037

ANOVA

Likelihood to purchase current version

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	68,773	13	5,290	1,505	,121
Within Groups	548,315	156	3,515		
Total	617,088	169			

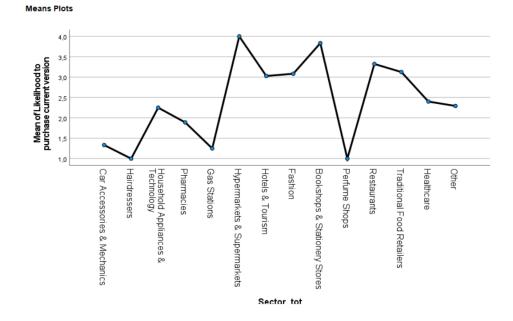
Robust Tests of Equality of Means^b

Likelihood to purchase current version

	Statistic ^a	df1	df2	Sig.
Welch				
Brown-Forsythe				

a. Asymptotically F distributed.

b. Robust tests of equality of means cannot be performed for Likelihood to purchase current version because at least one group has the sum of case weights less than or equal to 1.



Appendix III.O.3.1: One- way ANOVA LTP- Sector (Hairdressers & Perfume Shops considered as missing values)

			Desc	riptives				
Likelihood to purchase curre	entversion							
					95% Confider Me	ice Interval for an		
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Car Accessories & Mechanics	3	1,33	,577	,333	-,10	2,77	1	2
Household Appliances & Technology	4	2,25	2,500	1,250	-1,73	6,23	1	6
Pharmacies	9	1,89	1,764	,588	,53	3,24	1	5
Gas Stations	4	1,25	,500	,250	,45	2,05	1	2
Hypermarkets & Supermarkets	3	4,00	2,646	1,528	-2,57	10,57	2	7
Hotels & Tourism	36	3,03	1,978	,330	2,36	3,70	1	7
Fashion	12	3,08	1,621	,468	2,05	4,11	1	5
Bookshops & Stationery Stores	6	3,83	2,137	,872	1,59	6,08	1	7
Restaurants	31	3,32	1,922	,345	2,62	4,03	1	7
Traditional Food Retailers	8	3,13	1,553	,549	1,83	4,42	1	5
Healthcare	10	2,40	1,713	,542	1,17	3,63	1	5
Other	41	2,29	1,914	,299	1,69	2,90	1	7
Total	167	2,77	1,914	,148	2,47	3,06	1	7

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Likelihood to purchase current version	Based on Mean	1,714	11	155	,075
current version	Based on Median	1,000	11	155	,449
	Based on Median and with adjusted df	1,000	11	96,687	,452
	Based on trimmed mean	1,549	11	155	,119

ANOVA

Likelihood to purcha	ase current version				
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	59,577	11	5,416	1,531	,125
Within Groups	548,315	155	3,538		
Total	607,892	166			

() Sostor tot	(I) Contor tot	Difference (I- J)	Std. Error	Sig.	Lower Bound	Upper Bour
I) Sector_tot Car Accessories &	(J) Sector_tot Household Appliances &	-,917	1,437	,524	-3.75	0pper Bour 1,9
lechanics	Technology	-,517	1,457	,524	-5,75	1,4
	Pharmacies	-,556	1,254	,658	-3,03	1,9
	Gas Stations Hypermarkets &	,083	1,437	,954	-2,75	2,9
	Supermarkets &	-2,667	1,536	,084	-5,70	
	Hotels & Tourism	-1,694	1,130	,136	-3,93	
	Fashion	-1,750	1,214	,151	-4,15	
	Bookshops & Stationery Stores	-2,500	1,330	,062	-5,13	
	Restaurants	-1,989	1,137	,082	-4,24	
	Traditional Food	-1,792	1,273	,161	-4,31	
	Retailers					
	Other	-1,067	1,238	,390	-3,51	1,
lousehold Appliances &	Car Accessories &	-,959 ,917	1,125 1,437	,395 ,524	-3,18 -1,92	1,
echnology	Mechanics	,317	1,457	,524	-1,02	5,
	Pharmacies	,361	1,130	,750	-1,87	2,
	Gas Stations	1,000	1,330	,453	-1,63	3,
	Hypermarkets & Supermarkets	-1,750	1,437	,225	-4,59	1,
	Hotels & Tourism	-,778	,991	,434	-2,74	1,
	Fashion	-,833	1,086	.444	-2,98	1,
	Bookshops & Stationery Stores	-1,583	1,214	,194	-3,98	
	Restaurants	1.072	000	295	2.05	
	Traditional Food	-1,073	,999 1,152	,285 ,449	-3,05	1,
	Retailers	.,013		,		
	Healthcare	-,150	1,113	,893	-2,35	2,
	Other	-,043	,985	,965	-1,99	1,
harmacies	Car Accessories & Mechanics	,556	1,254	,658	-1,92	З,
	Household Appliances &	-,361	1,130	,750	-2,59	1,
	Technology					
	Gas Stations	,639	1,130	,573	-1,59	2,
	Hypermarkets & Supermarkets	-2,111	1,254	,094	-4,59	
	Hotels & Tourism	-1,139	,701	,106	-2,52	
	Fashion	-1,194	,829	,152	-2,83	
	Bookshops & Stationery Stores	-1,944	,991	,052	-3,90	
	Restaurants	-1,434	,712	,046	-2,84	-,
	Traditional Food	-1,236	,914	,178	-3,04	
	Retailers	.,===	,=	,	-1	
	Healthcare	-,511	,864	,555	-2,22	1,
an Stations	Other	-,404	,692	,561	-1,77	,
as Stations	Car Accessories & Mechanics	-,083	1,437	,954	-2,92	2,
	Household Appliances &	-1,000	1,330	,453	-3,63	1,
	Technology	620	1 1 2 0	670	2.07	1
	Pharmacies Hypermarkets &	-,639 -2,750	1,130 1,437	,573 ,057	-2,87	1,
	Supermarkets	-2,750	1,457	,007	-0,00	
	Hotels & Tourism	-1,778	,991	,075	-3,74	
	Fashion	-1,833	1,086	,093	-3,98	
	Bookshops & Stationery Stores	-2,583	1,214	,035	-4,98	-7
	Restaurants	-2,073	,999	,040	-4,05	-,
	Traditional Food	-1,875	1,152	,106	-4,15	
	Retailers					
	Other	-1,150	1,113	,303	-3,35	1,
wnermarkete P	Other Car Accessories &	-1,043	,985	,292	-2,99	
lypermarkets & upermarkets	Car Accessories & Mechanics	2,667	1,536	,084	-,37	5
	Household Appliances &	1,750	1,437	,225	-1,09	4
	Technology					
	Pharmacies Gas Stations	2,111	1,254	,094	-,37	4
	Gas Stations Hotels & Tourism	2,750	1,437	,057 ,391	-,09	3
	Fashion	,972	1,130	,391	-1,20	3
	Bookshops & Stationery	,167	1,330	,900	-2,46	2
	Stores					
	Restaurants Traditional Food	,677	1,137	,552	-1,57	2
	Retailers	,875	1,273	,493	-1,64	3
	Healthcare	1,600	1,238	,198	-,85	4
	Other	1,707	1,125	,131	-,51	3
otels & Tourism	Car Accessories & Mechanics	1,694	1,130	,136	-,54	3
	Household Appliances &	,778	,991	,434	-1,18	2
	Technology	,,,,,	,001	,104	1,10	2
	Pharmacies	1,139	,701	,106	-,25	2
	Gas Stations	1,778	,991	,075	-,18	3
	Hypermarkets & Supermarkets	-,972	1,130	,391	-3,20	1
	Fashion	-,056	,627	,930	-1,29	1
	Bookshops & Stationery	-,806	,829	,333	-2,44	
	Stores					
	Restaurants	-,295	,461	,523	-1,21	
	Traditional Food Retailers	-,097	,735	,895	-1,55	1
	Healthcare	,628	,672	,352	-,70	1
	Other	,735	,430	,089	-,11	1

Fashion	Car Accessories &	1,750	1,214	,151	-,65	4,1
rasmon	Mechanics Household Appliances &	,833	1,086	,444	-1,31	2,9
	Technology					
	Pharmacies	1,194	,829	,152	-,44	2,8
	Gas Stations Hypermarkets &	1,833	1,086	,093 ,451	-,31 -3,31	3,9
	Supermarkets	,011	1,214	,401	5,51	1,4
	Hotels & Tourism	,056	,627	,930	-1,18	1,2
	Bookshops & Stationery Stores	-,750	,940	,426	-2,61	1,1
	Restaurants	-,239	,639	,709	-1,50	1,0
	Traditional Food Retailers	-,042	,858	,961	-1,74	1,6
	Healthcare	,683	,805	,397	-,91	2,2
	Other	,791	,617	,202	-,43	2,0
Bookshops & Stationery Stores	Car Accessories & Mechanics	2,500	1,330	,062	-,13	5,1
	Household Appliances &	1,583	1,214	,194	-,81	3,9
	Technology Pharmacies	1.044	001	052	-,01	2.0
	Gas Stations	1,944 2,583 [°]	,991 1,214	,052 ,035	-,01	3,9
	Hypermarkets &	-,167	1,330	,900	-2,79	2,4
	Supermarkets					
	Hotels & Tourism	,806	,829	,333	-,83	2,4
	Fashion Restaurants	,750 ,511	,940 ,839	,426 ,544	-1,11 -1,15	2,6
	Traditional Food	,708	1,016	,487	-1,30	2,7
	Retailers					
	Healthcare Other	1,433	,971 ,822	,142	-,49	3,3
Restaurants	Car Accessories &	1,989	1,137	,082	-,08	4,2
	Mechanics					
	Household Appliances & Technology	1,073	,999	,285	-,90	3,0
	Pharmacies	1,434	,712	,046	,03	2,8
	Gas Stations	2,073	,999	,040	,10	4,0
	Hypermarkets & Supermarkets	-,677	1,137	,552	-2,92	1,5
	Hotels & Tourism	,295	,461	,523	-,62	1,3
	Fashion Bookshops & Stationery	,239 -,511	,639 ,839	,709 ,544	-1,02	1,5
	Stores			,044	-	
	Traditional Food Retailers	,198	,746	,791	-1,28	1,6
T	Healthcare	,923	,684	,179	-,43	2,2
	Other	1,030	,448	,023	,15	1,9
Traditional Food Retailers	Car Accessories & Mechanics	1,792	1,273	,161	-,72	4,3
	Household Appliances & Technology	,875	1,152	,449	-1,40	3,1
	Pharmacies	1,236	,914	,178	-,57	3,0
	Gas Stations	1,875	1,152	,106	-,40	4,1
	Hypermarkets & Supermarkets	-,875	1,273	,493	-3,39	1,6
	Hotels & Tourism	,097	,735	,895	-1,35	1,8
	Fashion	,042	,858	,961	-1,65	1,1
	Bookshops & Stationery Stores	-,708	1,016	,487	-2,71	1,3
	Restaurants	-,198	,746	,791	-1,67	1,3
	Other	,725 ,832	,892 ,727	,418	-1,04	2,4
Healthcare	Car Accessories &	1,067	1,238	,254	-1,38	3,5
	Mechanics					
	Household Appliances & Technology	,150	1,113	,893	-2,05	2,3
	Pharmacies	,511	,864	,555	-1,20	2,2
	Gas Stations Hypermarkets &	1,150	1,113	,303	-1,05	3,3
	Supermarkets &	-1,600	1,238	,198	-4,05	,8
	Hotels & Tourism	-,628	,672	,352	-1,96	,7
	Fashion Bookshops & Stationery	-,683 -1,433	,805 ,971	,397 ,142	-2,27 -3,35	,9 ,4
	Stores	-1,433	,971	,142	-3,30	,4
	Restaurants	-,923	,684	,179	-2,27	,4
	Traditional Food Retailers	-,725	,892	,418	-2,49	1,0
	Other	,107	,663	,872	-1,20	1,4
Other	Car Accessories & Mechanics	,959	1,125	,395	-1,26	3,1
	Household Appliances &	,043	,985	,965	-1,90	1,9
	Technology	404	602	564	.06	4.7
	Pharmacies Gas Stations	,404 1,043	,692 ,985	,561 ,292	-,96 -,90	1,7
	Hypermarkets &	-1,707	1,125	,131	-3,93	,5
	Supermarkets					
	Hotels & Tourism Fashion	-,735 -,791	,430 ,617	,089	-1,58	,1 ,4
	Bookshops & Stationery	-1,541	,822	,063	-3,16	,0,
	Stores					
	Restaurants Traditional Food	-1,030 [°] -,832	,448	,023 ,254	-1,91	-,1
	Retailers	-,032	,121	,204	2,21	,01
	Retailers					

*. The mean difference is significant at the 0.05 level.

Appendix III.O.4: Independent sample t-test LTP- Awareness REDUNIQ Insights

	Gr	oup Statistics										
	Awareness REDUNI Insights	Q N	Mean	Std. Deviation		td. Error Mean						
Likelihood to purchase	No	119	2,59	1,870		,171						
current version	yes	31	2,94	1,769		,318						
			Indepe	ndent Sam	ples T	est						
		Levene's	Test for Equa Variances	lity of				t-test fo	or Equality of Mear	IS		
								icance	Mean	Std. Error	95% Confidence Differe	
		F	Si	ig.	t	df	One-Sided p	Two-Sided p	Difference	Difference	Lower	Upper
Likelihood to purchase current version	Equal variances assumed		194	,660	-,931	148	,177	,354	-,347	,373	-1,085	,39
	Equal variances not assumed				-,962	48,965	,170	,341	-,347	,361	-1,073	,3
	Independent	Samples Effec	t Sizes Point Estimate	95% Confi Lower		nterval						
Likelihood to purchase	Cohen's d	1,850	-,188			.208						
current version	Hedges' correction	1,850	-,187			,207						
	Glass's delta	1,769	-,196			.204						

Cohen's d uses the pooled standard deviation. Hedges' correction uses the pooled standard deviation, plus a correction factor. Glass's delta uses the sample standard deviation of the control group.

Appendix III.O.4: Linear regression stepwise LTP – All variables

	Mean	Std. Deviation	Ν
Likelihood to purchase current version	2,66	1,855	149
Awareness REDUNIQ Insights	,20	,402	149
Usefulness of information provided	5,2349	1,52186	149
Clearness of information provided	5,4497	1,16501	149
Willingness to pay for the sectorial infographics	2,6027	3,73810	149
My firm needs information about transactions	4,07	1,721	149
My firm values data analysis	5,01	1,564	149
My firm has the competences/ tools to process the information provided in Sectorial Infographics	4,14	1,767	149
Sectorial Infographics provides enough information for my business	4,11	1,378	149
My firms would like to receive more costumized reports containing more detailed information about transactions and the market	4,42	1,669	149
Location_gruped=north	,2886	,45464	149
Location_gruped=islands	,0805	,27304	149
Location_gruped=center	,1477	,35595	149

Location_gruped=south	,5101	,50158	149
Sector Acessorios de Automóveis e Oficinas	,02	,141	149
Sector Cabeleireiros	,01	,115	149
Sector Eletrodomésticos e Tecnologia	,03	,162	149
Sector Farmácias	,06	,239	149
Sector Gasolineiras	,03	,162	149
Sector Hipermercados e Supermercados	,01	,115	149
Sector Hotelaria e Turismo	,24	,430	149
Sector Moda	,08	,273	149
Sector Papelarias a Livrarias	,04	,197	149
Sector Perfumarias	,01	,082	149
Sector Restauração	,21	,407	149
Sector Retalho Alimentar Tradicional	,05	,226	149
Sector Saúde	,07	,251	149
Age intervals	3,02	1,518	149
Implement data anyalisis x decisons	,50	,502	149
having a data analysis department	,08	,273	149

Descriptive Statistics

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method		
1	My firm needs information about transactions		Stepwise (Criteria: Probability-of- F-to-enter <= , 050, Probability-of- F-to-remove >= ,100).		
2	Willingness to pay for the sectorial infographics		Stepwise (Criteria: Probability-of- F-to-enter <= , 050, Probability-of- F-to-remove >= ,100).		
3	My firms would like to receive more costumized reports containing more detailed information about transactions and the market		Stepwise (Criteria: Probability-of- F-to-enter <= , 050, Probability-of- F-to-remove >= ,100).	5	Implement data anyalis
4	Sector Perfumarias		Stepwise (Criteria: Probability-of- F-to-enter <= , 050, Probability-of- F-to-remove >= ,100).		x decisons

5	Implement	. Stepwise
	data anyalisis	(Criteria:
	x decisons	Probability-of-
		F-to-enter <=
		050.
		Probability-of-
		F-to-remove
		>= .100).
		-= ,100).

a. Dependent Variable: Likelihood to purchase current version

Model Summary^f

			,,		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	,452 ^a	,205	,199	1,660	
2	,595 ^b	,354	,345	1,502	
3	,622°	,387	,375	1,467	
4	,636 ^d	,405	,388	1,451	
5	,651 ^e	,424	,403	1,433	2,273

		A	NOVAa			
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	104,283	1	104,283	37,826	<,001 ⁶
	Residual	405,261	147	2,757		
	Total	509,544	148			
2	Regression	180,255	2	90,128	39,961	<,001
	Residual	329,289	146	2,255		
	Total	509,544	148			
3	Regression	197,325	3	65,775	30,547	<,001
	Residual	312,218	145	2,153		
	Total	509,544	148			
4	Regression	206,371	4	51,593	24,505	<,001
	Residual	303,173	144	2,105		
	Total	509,544	148			
5	Regression	215,821	5	43,164	21,015	<,001
	Residual	293,723	143	2,054		
	Total	509,544	148			

Coefficients^a

		Unstand	ardized Coefficient	Standardized Coefficients			Collinea	rity Statistics	5
Model		В	Std. Error	Beta	t	Sig.	Tolerance	e VIF	
	5	(Constant)	,033	,356		,092	,927		
		My firm needs information about transactions	,293	,089	,272	3,311	,001	,597	1,676
		Willingness to pay for the sectorial infographics	,201	,032	,405	6,220	<,001	,949	1,054
		My firms would like to receive more costumized reports containing more detailed information about transactions and the market	,269	,090	,242	2,977	,003	,612	1,634
		Sector Perfumarias	-3,294	1,463	-,145	-2,252	,026	,967	1,035
		Implement data anyalisis x decisons	-,520	,243	-,141	-2,145	,034	,937	1,067

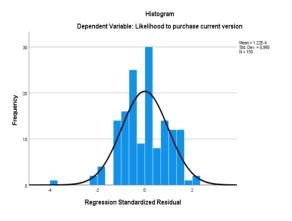
a. Dependent Variable: Likelihood to purchase current version

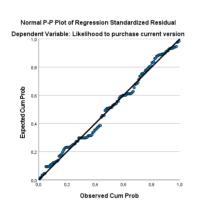
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	,34	6,42	2,66	1,204	150
Residual	-5,424	3,115	,000	1,404	150
Std. Predicted Value	-1,917	3,119	,002	,997	150
Std. Residual	-3,785	2,174	,000	,980	150

a. Dependent Variable: Likelihood to purchase current version

Model	Dimension	Eigenvalue	Condition Index
1	1	1,922	1,000
	2	,078	4,953
2	1	2,395	1,000
	2	,527	2,132
	3	,078	5,529
3	1	3,297	1,000
	2	,573	2,398
	3	,080,	6,425
	4	,050	8,114
4	1	3,312	1,000
	2	1,014	1,808
	3	,544	2,468
	4	,080,	6,442
	5	,050	8,134
5	1	3,881	1,000
	2	1,038	1,934
	3	,585	2,575
	4	,366	3,257
	5	,080,	6,973
	6	,050	8,810





Appendix III.P: Repeated measures ANOVA for different product versions

Descriptive Statistics

	•		
	Mean	Std. Deviation	N
Likelihood to purchase current version	2,66	1,849	150
Likelihood to purchase if more interactive,not PDF	3,37	1,913	150
Likelihood to purchase if TOP 3 foreign nationalities in Faturação por Origem	3,29	1,848	150
Likelihood to purchase adding average purchase for every region	3,79	2,014	150
Likelihood to purchase adding billing folow/week days	3,85	2,005	150
Likelihood to purchase if all changes	3,86	2,040	150

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Likelihood2purchase	Pillai's Trace	,433	22,169 ^b	5,000	145,000	<,001	,433
	Wilks' Lambda	,567	22,169 ^b	5,000	145,000	<,001	,433
	Hotelling's Trace	,764	22,169 ^b	5,000	145,000	<,001	,433
	Roy's Largest Root	,764	22,169 ^b	5,000	145,000	<,001	,433

a. Design: Intercept Within Subjects Design: Likelihood2purchase

b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: Changes

					Epsilon ^b			
Within Subjects Effect	Mauchly's W	Approx. Chi- Square	df	Sig.	Greenhouse- Geisser	Huynh-Feldt	Lower-bound	
Likelihood2purchase	,287	183,468	14	<,001	,650	,667	,200	

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept Within Subjects Design: Likelihood2purchase

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: Changes	
------------------	--

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Likelihood2purchase	Sphericity Assumed	165,032	5	33,006	44,429	<,001	,230
	Greenhouse-Geisser	165,032	3,252	50,755	44,429	<,001	,230
	Huynh-Feldt	165,032	3,333	49,519	44,429	<,001	,230
	Lower-bound	165,032	1,000	165,032	44,429	<,001	,230
Error	Sphericity Assumed	553,468	745	,743			
(Likelihood2purchase)	Greenhouse-Geisser	553,468	484,484	1,142			
	Huynh-Feldt	553,468	496,573	1,115			
	Lower-bound	553,468	149,000	3,715			

Pairwise Comparisons

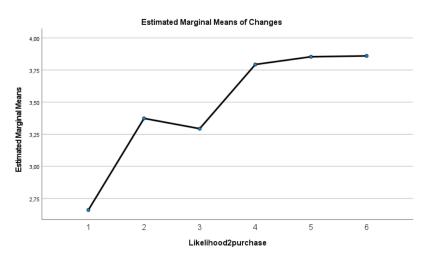
Measure: Changes						
		Mean Difference (l-			95% Confiden Differ	
(I) Likelihood2purchase	(J) Likelihood2purchase	J) J	Std. Error	Sig. ^b	Lower Bound	Upper Bound
1	2	-,713	,108	<,001	-,927	-,500
	3	-,633	,132	<,001	-,893	-,373
	4	-1,133	,125	<,001	-1,381	-,886
	5	-1,193	,131	<,001	-1,453	-,934
	6	-1,200	,126	<,001	-1,449	-,951
2	1	,713	,108	<,001	,500	,927
	3	,080,	,096	,407	-,110	,270
	4	-,420	,086	<,001	-,591	-,249
	5	-,480	,099	<,001	-,676	-,284
	6	-,487	,089	<,001	-,662	-,312
3	1	,633	,132	<,001	,373	,893
	2	-,080	,096	,407	-,270	,110
	4	-,500	,087	<,001	-,671	-,329
	5	-,560	,096	<,001	-,749	-,371
	6	-,567	,090	<,001	-,744	-,389
4	1	1,133	,125	<,001	,886	1,381
	2	,420	,086	<,001	,249	,591
	3	,500	,087	<,001	,329	,671
	5	-,060	,063	,342	-,184	,064
	6	-,067	,062	,282	-,189	,055
5	1	1,193	,131	<,001	,934	1,453
	2	,480	,099	<,001	,284	,676
	3	,560	,096	<,001	,371	,749
	4	,060	,063	,342	-,064	,184
	6	-,007	,062	,915	-,130	,117
6	1	1,200	,126	<,001	,951	1,449
	2	,487	,089	<,001	,312	,662
	3	,567	,090	<,001	,389	,744
	4	,067	,062	,282	-,055	,189
	5	,007	,062	,915	-,117	,130

Based on estimated marginal means

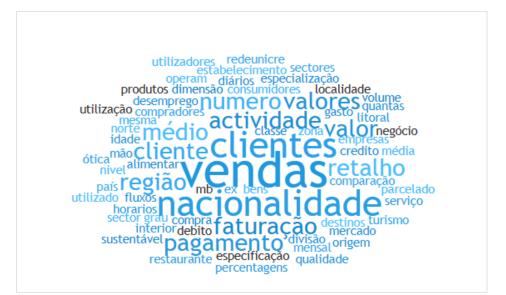
*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).





Appendix III.Q: Suggestions for improvement: Information that would significantly increase LTP Sectorial Infographics



Sugestão 1	Sugestão 2	Sugestão 3
N/A	N/A	N/A
	N/A	
N/A		N/A
Qualidade	De	Trabalho
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
Especialização do mercado	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
dimensão do estabelecimento	inserção de áreas geográficas mais específicas	N/A
N/A	N/A	N/A
produtos	margens	N/A
N/A	N/A	N/A
/alor médio gasto pelo cliente por serviço	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
nacionalidade do cliente	meio utilizado para efectuar a reserva	N/A
Vendas por destinos	Area geografica	N/A
N/A	N/A	N/A
ralores diários	valores semanais	valores mensais

NUMERO CLIENTES RESTAURANTE	NUMERO CLIENTES POR PAIS	TICKET MEDIO POR PAIS
N/A	N/A	N/A
meio de pagamento utilizado / debito/credito parcelado/	hora média da efetivaçãodas compras por região x valor médio gastoo	N/A
N/A	N/A	N/A
/endas por classe de clientes	Vendas por classes de produtos / serviços	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A N/A	N/A N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
Turismo Sustentável	Turismo de Natureza	Turismo Pedestre.
N/A	N/A	N/A
N/A	N/A	N/A
Faturação por localidade mensal	Faturação por nacionalidade	Faturação por dias da semana
N/A	N/A	N/A
Volume negócio	Férias	N/A
N/A	N/A	N/A
Horarios de fluxos de clientes	Idade média dos clientes	N/A
N/A	N/A	N/A
Vendas por dia	Vendas por semana	E fecho do mes
N/A	N/A	N/A