UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL

ESCOLA DE ADMINISTRAÇÃO

PROGRAMA DE PÓS-GRADUAÇÃO EM ADMINISTRAÇÃO

DOUTORADO EM ADMINISTRAÇÃO

JULIANA BIRKAN AZEVEDO

UBIQUITY OF OFFERINGS: the development and validation
of a scale to measure omnichannel perception

Porto Alegre

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Tese de Doutorado apresentada ao Programa de Pós-Graduação em Administração da Universidade Federal do Rio Grande do Sul, como requisito parcial para a obtenção do título de Doutora em Administração.

Orientador: Prof. Dr. Luiz Antônio Slongo

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ABSTRACT

This thesis aims to better understand how customers perceive omnichannel, developing a scale for this. This channel strategy, which is an upgrade of multi and cross-channel, brings the ubiquity of offerings, that is, the integration and interaction of marketing channels, providing a unique shopping experience. Although it has been a widely studied phenomenon, Marketing Science Institute considers it one of the top research priorities (MSI, 2018), reinforcing the need of studies such as this. Unraveling the customer point of view, this study attempts to bring a holistic perspective of the subject. Having the theory about omnichannel along with the ten items brought by Li et al. (2017) to measure Cross-Channel Integration as a starting point, this research began with a qualitative inquiry, using means-end theory and interviewing 29 participants in order to form attribute-consequence-value chains and understand the reasons why customers use more than one channel in the same shopping journey. After that, a panel of experts was performed, contemplating two national and three international scholars. These two steps were crucial to form the steps that took place thereafter. Three rounds of quantitative surveys were conducted using online questionnaires in order to reduce the number of variables into an ideal number of factors. After exploratory factor analysis and confirmatory factor analysis, the final measurement tool had 17 items in 5 factors: post-purchase services, promotions, BOPS, advantages and interactions with the retailer. Also, the predictive power of the scale was tested, and different simulations showed new perspectives for future studies. Specially the first factor was strongly related to loyalty outputs, that are satisfaction with the ubiquity of channels, recommendation and intention to use more channels from that retailer. Besides the relevance for marketing theory concerning channels, the research also constributes for retailers that seek to stand out for adopting omnichannel.

Keywords: retailing, integration, interaction, channels, scale development.

RESUMO

Esta tese busca entender melhor como os clientes percebem o omnichannel, desenvolvendo uma escala para ele. Essa estratégia de canal, que é uma atualização de multi canal e cross-channel, traz a onipresença de ofertas, ou seja, a integração e a interação dos canais de marketing, proporcionando uma experiência de compra única. Embora tenha sido um fenômeno amplamente estudado, o Marketing Science Institute o considera uma das principais prioridades de pesquisa (MSI, 2018), reforçando a necessidade de estudos como este. Desvendando o ponto de vista do cliente, este estudo tenta trazer uma perspectiva holística do assunto. Tendo a teoria sobre omnichannel juntamente com os dez itens trazidos por Li et al. (2017) para medir a integração entre canais como ponto de partida, esta pesquisa começou com uma investigação qualitativa, usando a teoria meios-fim, e entrevistando 29 participantes, a fim de formar cadeias de atributo-consequência-valor e entender as razões pelas quais os clientes usam mais que um canal na mesma jornada de compra. Em seguida, foi realizado um painel de especialistas, contemplando dois acadêmicos nacionais e três internacionais. Esses dois passos foram cruciais para formar os passos que ocorreram posteriormente. Três rodadas de pesquisas quantitativas foram realizadas usando questionários on-line, a fim de reduzir o número de variáveis em um número ideal de fatores. Após análise fatorial exploratória e confirmatória, a ferramenta final de medição teve 17 itens em 5 fatores: serviços pós-compra, promoções, BOPS, vantagens e interações com o varejista. Além disso, o poder preditivo da escala foi testado, e diferentes simulações mostraram novas perspectivas para estudos futuros. Especialmente, o primeiro fator estava fortemente relacionado aos resultados de lealdade, que são a satisfação com a onipresença dos canais, a recomendação e a intenção de usar mais canais do varejista. Além da relevância para a teoria do marketing em relação aos canais, a pesquisa também contribui para varejistas que procuram se destacar por adotar o omnichannel.

Palavras chave: varejo, integração, interação, canais, desenvolvimento de escala.

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SUMMARY

1 INTRODUCTION

Marketing and distribution have always been linked. When the 4Ps of marketing, which are product, price, promotion and place, were popularized by McCarthy (1964), he explained that place was the element devoted to distribution. Marketing functions, according to Bowersox and Morash (1989), flow into distribution channels, which should be ordered in such a way as to result in customer satisfaction.

Considering marketing channels, which contemplates general sales office, district sales office, distributor, retailer, and then reach the final consumer (BOWERSOX; MORASH, 1989), it is relevant to stand that the kind of channel referred in this study is, as Käuferle and Reinartz (2015) used, that is, not information-only media channels. That is, the joint of distribution and marketing channels. More precisely, any customer contact point or where the company and the customer can interact (BECK; RYGL, 2015; NESLIN et al., 2006).

As it can be observed in the theoretical review, this merger of channels was possible due to an evolution that took place in the practice and theory of channels. The single channel led to multichannel, and then to cross-channel. However, the cross-channel also evolved considering the ubiquitous reality to the omnichannel. This new phenomenon called omnichannel is explained by Beck and Rygl (2015) as the full interaction and integration of all channels.

Using new distribution channels was one of the six types of adjacencies used by successful companies to outperform their competitors (ZOOK; ALLEN, 2003). Not only products can offer value to the consumers, but also the form a company accesses the market. The attention and interest given by marketing academia to the issue can be used as a baseline: "In just the past decade, the number of publications focused on marketing channels has grown by more than 150%" (WATSON et al., 2015, p.1).

Although customers demand a variety of channels and firms do want to exploit this, they need to avoid overly intensive distribution (KÄUFERLE; REINARTZ, 2015). The authors develop a multi-channel measure for the degree of channel usage for wholesaling, analyzing the performance. In the retail industry, the use of multi-channel has been increasing. However, using a retailer operating multiple channels, Rhee (2010) found that the Internet channel works for consumers with low perceived risk and high experience and familiarity with the product, while the call center channel

is a better option for consumers with high perceived risk and low experience and familiarity with the purchase.

Delivering products through more than one channel is a well-established strategy. According to Rigby (2011), consumers perceive the virtual and the real world as one, while some companies still wonder if they should invest in digital capabilities. The fact that the channels become blurred, ubiquitous, appearing to have no limits among them, is what characterizes the most this new way of accessing the customers with a seamless experience: the omnichannel (BERNON; CULLEN; GORST, 2016; HÜBNER; WOLLENBURG; HOLZAPFEL, 2016; VERHOEF; KANNAN; INMAN, 2015; BRIEL, 2018).

Besides the traditional physical stores, call centers and catalogs, customers have been using channels such as e-commerce, mobile applications and social networks. However, it is not a matter of which channel the customer will use. Nowadays it seems usual to buy something online and pick it up at a physical store, to check the price in one channel and buy in the other or even to try on a piece of clothing at a shop and order it by another channel. That is, customers have been moving through channels in the same shopping experience, and, not rarely, using them simultaneously.

However, the ubiquitous and especially integrative properties of channels have not always been this deep. Whereas multi-channel is a subject that has been exploited by marketing literature for a long time, its relation to the firm performance is relevant to both the academy and the practice of marketing.

The possibilities of channel combination in omnichannel is near endless, since the consumer can transit through all the types of channels all the time, and not only once. The channel types, according to Saghiri et al. (2017, p. 58) "may include stores, websites, social media, emails, ads, catalogs (for pre-purchase); cash, cards, coupons, loyalty cards (for payment); stores, home delivery, collection points (for delivery); post, stores, and drop-off points (for return)".

Therefore, this thesis aims to understand how consumers react to omnichannel, by developing a scale for omnichannel perception. Following this introduction, it unfolds as follows: delimitation of the theme and definition of the problem, objectives, the theoretical review of marketing channels; multi-channel evolving to omnichannel; consumer behavior and perceived value in omnichannel; channel-related scales; the methods used in order to develop the scale, containing the qualitative and quantitative phases; the results of each of the five steps, being (1) means-end interviews using A-C-V; (2) panel of experts; (3) first round of survey; (4) second round of survey; and (5) last round of

survey; and, finally, the concluding remarks, containing theoretical and managerial constributions of the study.

1.1 DELIMITATION OF THE THEME AND DEFINITION OF THE PROBLEM

Considering the ubiquity of offerings in different channels during the same shopping journey, omnichannel has emerged as the tendency that retailers have used to provide a seamless experience anywhere and anytime (BERNON; CULLEN; GORST, 2016; HÜBNER; WOLLENBURG; HOLZAPFEL, 2016; VERHOEF; KANNAN; INMAN, 2015).

As an emerging theme, omnichannel has been broadly studied by logistics and supply chain management scholars, who have especially focused in an operational bias of the theme. There is also a majority amount of studies regarding the subject in the field of Marketing, especially if one considers service, retailing and service management as part of its literature (GALIPOGLU et al, 2018). But although one can find this much research of marketing studies of omnichannel in marketing, it seems to be still embryonic. For instance, the papers used in the theoretical review relate to "omnichannel consumers" or even "omni-shoppers" as if they were a homogeneous group with similar needs and desires.

The Marketing Science Institute (MSI) presents, every two years, a list of priority topics in order to guide marketing scholars in their researches. The terms multi-channel and omnichannel are present in the 2016-2018 top five priorities. According to the institute, these priorities influence the marketing academia and represent the needs and interest of their member companies (MSI, 2016). The first priority is "Quantitative models to understand causality, levers, and influence in a complex world", and one of its topics is "Understanding "omni-screen" and "omni-channel" drivers of customer decision making and behavior" (MSI, p. 4, 2016). The priority becomes more specific, "The Rise of Omnichannel Promotion and Distribution" as one of the Marketing Priority Topics (MSI, 2018).

With the merging of offline and online more present in the reality every day, one can conclude that, at a given point, every consumer will be omnichannel consumer. That becomes unavoidable since the physical, online, mobile, catalogs and other channels are present in every stage, when the consumer is looking for and trying the product, when he is purchasing and paying for it, and in the delivery and even the return.

There is a lack of a robust theoretical foundation, as Galipoglu et al (2018) advocate, and the need of more studies in this field considering different behaviors and different profiles of consumers is latent and should receive a special attention from marketing. The development of this and other studies in this area are important both to theory and practice of marketing, once it tries to better understand a new reality, that is the offline and online merging together to offer an ubiquitous, seamless experience to the consumers.

By developing and validating a tool for measuring omnichannel perception by the perspective of the customer, that is, attempting to understand their reactions and responses to this ubiquity of offerings and seamless shopping experience. Customer´s Perception was also what Li et al. (2017) measured with Cross-Channel Integration (CCI). After exposing this new area of inquiry, and the marketing academia claim for more studies in omnichannel, the present study is expected to answer the problem found: **how can omnichannel perception be measured?**

1.2 OBJECTIVES

Given the delimitation of the theme and problem definition, objectives were generated with the intention of connecting theory and practice.

1.2.1 General objective

To develop a scale to measure customers´ perception of omnichannel.

1.2.2 Specific objectives

- To conceptualize the construct omnichannel;
- To dimension the domain of omnichannel;
- To understand what items customers relate to omnichannel;
- To test the predictive power of the scale;
- To help retailers adopting or improving their omnichannel practices.

1.3 STUDY RELEVANCE

The present study is relevant both theoretical and practically. Not only there has been a constant claim for a better understanding this new reality, but also call for papers from journals and conferences. In several studies cited on the literature review, one can see that future researches are needed, specially considering the emergence and newness of omnichannel.

As well as omnichannel has been studied in logistics, supply chain management and physical distribution approaches in a more operational bias, the relevance of understanding how consumers react to omnichannel is relevant to the marketing academia.

In a practical perspective, understanding how customers react to omnichannel seems to be relevant not only to retailers that intend to provide a ubiquitous offer of goods or even services. It is also expected that, with the scale to be developed, companies can realize what omnichannel really is, synchronizing its channels and offering the same experience in many channels during the same shopping journey.

An omnichannel perception scale can provide useful data with the purpose of understanding behavior of adopting seamlessly several channels in the same shopping experience, specially if customers perceive and experience in that specific retailer the real integration and interaction they were expecting.

In addressing all of this, this thesis contributes to marketing academia, specially the literature on multi-/omnichannel retailing and to consumer behavior.

2   LITERATURE REVIEW

In this chapter, the theoretical background is presented. First, a theory that brings the importance of distribution and transaction channels to marketing is presented. In the second item, the evolution of multi-channel to omnichannel is explained, considering the cross-channel as part of this evolution as well. Then, there is a review of how the consumer behavior and perceived value are treated in omnichannel literature. And finally, the channel-related scales are presented.

2.1 MARKETING CHANNELS

Bowersox and Morash (1989) contribute that marketing functions flow into distribution channels, which should be ordered in such a way as to result in customer satisfaction. The aforementioned authors conceptualize distribution channel as a network of activities that flow to the desires and needs of the clients. Physical distribution is explained as the set of activities related to transportation so that the order can arrive at the expected place, time and condition (BOWERSOX, 1969), where there should be a vertical system of cooperative marketing between firms.

On the other hand, transaction channels (marketing channels), separated from logistics channels, pass through the general sales office, district sales office, distributor, retailer, and then reach the final consumer (BOWERSOX; MORASH, 1989). Such separation takes place due to the specialization, so that the participants of the channel can carry out their activities with greater efficiency and effectiveness. The logistics and transaction channels only truly merge in the end, that is, when reaching the final consumer. The authors also point out that the most efficient channel for sales may not be the same one for logistics.

The benefits of separating logistics and transaction channels, according to Bowersox and Morash (1989) include efficiency in economies of scale, less redundancy of activities, greater flow coordination, reducing costs and increasing revenues, to increase specialization, leading to a system more competitive channel. However, more recently, Bowersox et al. (2014) argue that the distribution channel must respond to requests for transactions and that communication plays an important role as long as it brings flexibility and reliability. The authors defend an integrated supply chain, with information flow interaction. In this sense, they complement that transactional marketing that interacts with short-term clients gives way to relationship marketing, with long-term relationships

based on maintaining, not just attracting new customers. It is important to note that the marketing and distribution functions are no longer totally separate.

The evolution of research in channel literature, especially the marketing channel one, over the past 30 years was analyzed through four perspectives. The first one is theories and constructs, the second one is strategies, the third one is units of analyses, and the fourth substantive domains (WATSON et al., 2015). In their detailed literature review, the before mentioned authors divide the theories and constructs between economic-based approaches and behavioral-based approaches, while the strategic decisions remain on the channel selection and channel governance. When referring to the unit of analysis, the same authors highlight the importance of dyad, network, and two-sided market platforms. As to substantive domains, Watson et al (2015) focus on relationships, channel structure, pricing, franchising, market entry, product and service.

Channels are crucial to a company, and Kozlenkova et al (2015) illustrate this with the Wal-Mart example, a company whose success – in 2014 Forbes ranked it as the top company in the world in sales, the 18th most valuable brand and 26th in annual profits – is clearly connected to its supply chain management, besides its strategies and operations.

An analytic decision-making framework for multi-channel evaluation was developed, first with an analytic network, based on the inputs of managers and literature, to depict the interrelationships between decision criteria, and then the model was tested in Cisco China. (CHEN; KOU; SHANG, 2014)**.** The existing managerial decision-making approaches to evaluate marketing channels are considered with their respective references, strengths and weaknesses (CHEN; KOU; SHANG, 2014, p.2). Therefore, these approaches could be used in omnichannel studies, as long as they consider the differences between their operability and characterization. The authors understand that there are crucial factors of multi-channel distribution, with the key factors relationship, function, cost and performance, each one with its dimensions. It would be interesting to check, however, if these dimensions work in the same way in omnichannel markets.

The framework developed by the authors (CHEN; KOU; SHANG, 2014) and tested in Cisco China considered issues such as trust, opportunism and perceived unfairness in the channel relationship dimension. As to channel function, they considered display, delivery and inventory. Channel performance consisted in existing customers' loyalty and attractiveness to potential customer by the authors` model. And finally, Chen, Kou and Shang (2014) considered the channel cost, with acquisition cost, coordination cost and product return cost.

Decision making towards channel choice has long been a concern in academy. A model of customer channel choice was tested first in a book retailer and then replicated using data from a durables and apparel retailer (VALENTINI; MONTAGUTI; NESLIN, 2011). The authors show that the decision processes of customers' channel choice evolve over time, and the main reason for such evolution is customer learning.

2.2 MULTI-, CROSS- AND OMNICHANNEL

Multi-channel indicates when two or more channels are used, although without the presence of interaction by consumers or integration controlled by the retailer (BECK; RYGL, 2015). As the terminology Multi-channel refers to those cases when more than one channel is used, a framework developed and tested on a study performed at Cisco China, aimed at differentiating the performances of alternative marketing channels (CHEN; KOU; SHANG, 2014).

It is relevant to perceive that when the retailer expands online shopping options, it does not mean reducing traffic in physical stores as long as the company offers conveniences developed especially for each of those points. In this case, the physical store, with its new role, and the online one coexist and even prosper together (AVERY et al., 2012). It refers to a more integrated strategy related to channels.

After reviewing several articles on the channel classification, Beck and Rygl (2015) concluded that different from multi-channel, which has no integration controlled by retailer and no interaction triggered by the consumer, and cross-channel, which has partial interaction and integration; in the omnichannel approach the customer can trigger full interaction and the retailer controls full integration of all channels.

There is also the term Cross-Channel Integration (CCI), which appears to be an upgrade of the cross-channel strategy, coordinating multiple channels. CCI had a positive influence on sales growth as companies that are able to coordinate multiple channels can improve consumer confidence, increase loyalty, drive conversion rates, and create opportunities of cross-selling, according to Cao and Li (2015).

Due to the high competition among retailers, integrating channels has become an essential precondition (GREWAL et al., 2017). Not only integrated, but also there is an overlap of channels in

the omnichannel approach, which is different from the multi-channel one. In this sense, omnichannel retailing "… has an integrated perspective, with seamless interactions between online and bricks-and mortar channels" (HÜBNER; WOLLENBURG; HOLZAPFEL, 2016, p. 562). Accordingly, the merger of online and offline channels is the main point to be considered when studying omnichannel, highlighting the integrated experience for the consumer.

Another difference is that when using the omnichannel "The retailer offers the customer all channels that are currently wide-spread, which at present means the physical store, catalog, telephone, online shop and mobile shop" (BECK; RYGL, 2015, p. 174). Not only the use of mobile and the connectivity, but also the ubiquitous computing and the contactless technologies are leading to a different consumer experience (PANTANO; PRIPORAS, 2016).

The attempt to provide each customer the suitable information in the right time and context is another issue that deserved attention. This can be answered using the relationship between consumers and their mobile devices, and then understanding the impact of mobile on the behavior throughout the purchase journey becomes vital (SHANKAR et al., 2016).

When it comes to cannibalism between some channels, researchers (AVERY et al., 2012; FORNARI et al., 2016) have found that it may happen in the short term; but, on the other hand, over time, the channels begin to interact and reinforce each other, which leads to an increase in sales in all of them. Such interaction need had led to a tendency of shifting from the traditional perspective to a new one, to the omnichannel approach.

In this sense, Verhoef et al (2015, p. 2) explain one of the differences: "Compared to the multi-channel phase, omnichannel thus involves more channels. An important additional change is that the different channels become blurred as the natural borders between channels begin to disappear". Considering the coexistence of multi-channel and integrated marketing communication (IMC), there is even an idea of omnichannel marketing, a communication framework with the combination of all buyer-seller touch points, creating one interaction mechanism: "Omni-channel marketing has its conceptual roots in two interrelated disciplines: multi-channel marketing and IMC" (CUMMINS; PELTIER; DIXON, 2016, p. 3).

Omnichannel is an emerging theme (PIOTROWICZ; CUTHBERTSON, 2014; SAGHIRI et al., 2017), having its a recent and growing concept derived from the combination of the Latin word "omni", whose meaning is "all" or "universal" with the word "channel" (LAZARIS; VRECHOPOULOS, 2014). It first appeared in the academic field in a research of the International

Data Corporation (IDC), as stated: "The first encounter of the term was at IDC's Global Retail Insights research unit reports, where Parker & Hand (2009) and Ortis & Casoli (2009) suggested that the 'omnichannel' shopper is an evolution of the multi-channel consumer who instead of using channels in parallel, he uses them all simultaneously" (LAZARIS; VRECHOPOULOS, 2014).

Considering that omnichannel is a recent concept, since it offers "customers a seamless shopping experience across all retail formats" (BERNON; CULLEN; GORST, 2016, p. 584), some papers have highlighted the main characteristics of this approach (SAGHIRI et al., 2017; VERHOEF; KANNAN; INMAN, 2015), while others (ISHFAQ et al., 2016; ZHANG et al., 2016) focus on understanding the physical distribution process attributes and how retailers can realign efforts that advance their omnichannel capabilities. Focusing on physical distribution, it is highlighted that:

> While retailers view omni-channel capabilities as a viable defense to fend off new competitors and increase market share, success is not simply a function of an appealing website and compelling prices for desirable products. A strong backend physical distribution process is essential for fulfilling customer orders in a timely and accurate fashion (ISHFAQ et al., 2016, p. 545).

Table 1 summarizes the main differences between multi- and omnichannel, in order to better understand such divergence. The dimensions considered in the comparison are: focus, scope, separation of channels, brand versus channel customer relationship focus, channel management and objectives (VERHOEF; KANNAN; INMAN, 2015), inventory, picking, assortment, delivery, return, organization and IT systems (HÜBNER; WOLLENBURG; HOLZAPFEL, 2016).

Table 1– Main differences between Multi-channel and omnichannel

	Multi-channel	Omnichannel
Channel focus	Interactive channels only	Interactive and mass-communication channels
Channel scope	Retail channels: store, online website, and direct marketing (catalog)	Retail channels: store, online website, and direct marketing, mobile channels, social media. Customer Touchpoints (incl. mass communication channels: TV, Radio, Print, C2C, etc).
Separation of channels	Separate channels with no overlap	Integrated channels providing seamless retail experiences
Brand versus channel customer	Customer – Retail channel focus	Customer- Retail channel – Brand focus

relationship focus		
Management and Objectives	Per channel (i.e., sales per channel, experience per channel)	Cross-channel (i.e., overall retail customer experience, total sales over channels)
Inventory	Channel-separated inventories	Integrated inventory in one warehousing solution
Picking	Pick separately by channel	Cross-channel picking (e.g., picking in one zone)
Assortment	Limited set of SKUs online	More extensive assortment online than offline
Delivery	Offer postal delivery exclusively for distance orders	Delivery options are expanded through process integration to include pick-up service as well
Return	Customers can only return online bought goods through the postal service	The return of goods is not couples to the channel where it was bought
Organization	Operation responsibility for the channels is separated	Single, integrated OC logistics unit with cross-channel coordination
IT Systems	Separated and channel-specific ERP systems	Joint, cross-channel ERP system with real time access

Source: Adapted from Verhoef et al (2015, p. 3), Hübner; Wollenburg; Holzapfel (2016, p. 577).

As suggested by Table 1, and also by analyzing the introduction to the special issue on multi-channel retailing on the special issue of Journal of Retailing (VERHOEF et al, 2015), when referring to impact of channels on performance research theme, one of the papers was related to multi-channel, while three of them were related to omnichannel. That is to say that there has been a shift on the literature of channels, increasing the papers about omnichannel, which is the most ubiquitous form possible of channels strategy (WATSON et al., 2015).

The touchpoints, frequently mentioned in omnichannel literature and present in Table 1 are points where customers and retailers interact with each other. But Payne, Peltier and Barger (2017) specify that personal brand touchpoints are the ones that consumers and brand personnel have direct contact, which can be either face-to-face or digitally. On the other hand, they define non-personal brand touchpoints as the ones where the interaction happens without a personal encounter at the time of contact. The number of touchpoints have increased, specially due to the existence of digital technologies (LEWIS et al., 2014).

Again highlighting the integrative perspective of omnichannel, another summary of the transition from multi-channel to omnichannel is provided by Hübner et al (2016), focusing on retail

logistics. Trying to find out How and why retailers transit from multi-channel to omnichannel logistics, the authors consider the transition including inventory, picking, assortment, delivery and return, enabled by organization and IT systems, as also shown in Table 1 (HÜBNER; WOLLENBURG; HOLZAPFEL, 2016)

With the rising of omnichannel, the supply chain network also needs to be remodeled, with flexible forms of sales and deliveries. That is what motivated a group of scholars to introduce the multiple distribution channels supply chain network (MDCSCN), aiming at an intelligent customer order assignment system, and, to solve these problems they incorporate the Pareto optimality to ABC algorithm, designing the MOABC (ZHANG et al., 2016).

Some of items that the retailers interested in adopting the omnichannel strategy may need to focus on are listed by Piotrowicz et al (2014, p. 14): "including mobile and social networks as new channels, balancing privacy and customization, and redesigning their supply chain network, while at the same time keeping in mind different customer requirements".

In Figure 1, Hübner et al. (2015) provide an overview of the main differences among the channel strategies. They used an illustrative way to show why omnichannel logistics is the most complex and associated of the choices.

Figure 1- Overview of differences between single, multi- and omnichannel
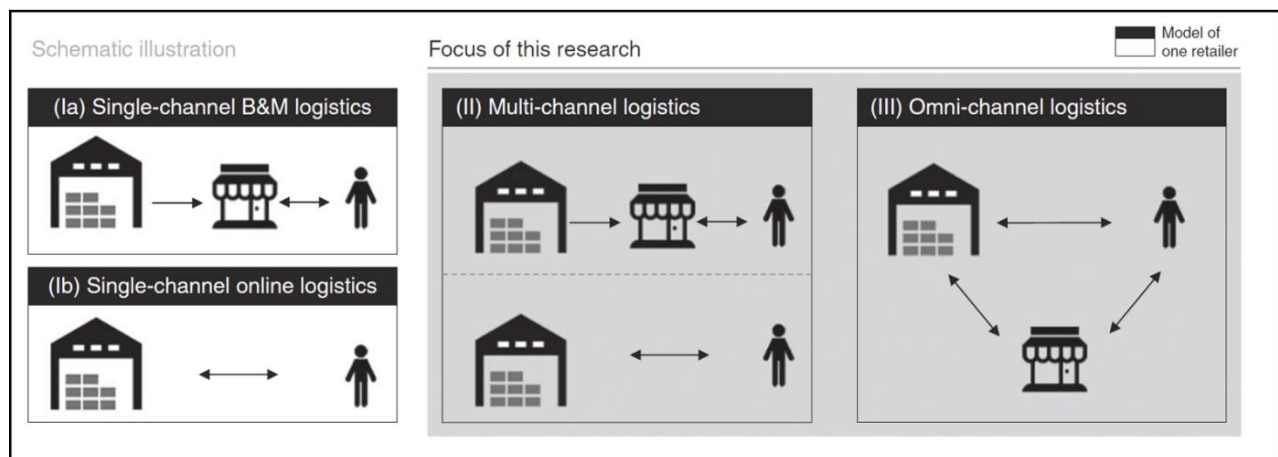
Source: Hübner et al, 2015, p. 564.

To keep delivery costs manageable, omnichannel retailers have additional options that include: drop shipping orders from suppliers and fulfilling orders from store inventory (BAILEY AND RABINOVICH, 2005). The choice depends on the economics of inventory, delivery costs, and

risk management. The physical separation between the customer-specified destination and the location where inventory is held affects the speed at which an online customer order can be delivered (RABINOVICH AND BAILEY, 2004). Another way to improve the efficiency of delivering products to customers is to ship packages (for online orders) to stores through the routine store-replenishment shipments from the distribution centers. Online customers can stop by their local store to pick up these packages, often with no delivery charges.

It is comprehensible that the change in the functionality of channels brings changes in sales as well. In this sense, a research framework in the context of personal selling and sales management was developed adapting to the omnichannel reality (CUMMINS; PELTIER; DIXON, 2016). The authors suggest six research areas to be exploited: impact on firm performance; impact on relationships; selling process; sales contexts; impact of technology; and the role of various communication tools and platforms and they discuss the subjects and research opportunities for omnichannel within each area.

Another framework was proposed by Saghiri et al. (2017) as a stepping stone to omnichannel systems, focusing on three dimensions: channel stage, channel type and channel agent (with dynamic interactions and connectedness). According to the authors, the channels studied were all the available means to communicate and interact with the retailers´ customers (which were: Amazon, Argos, John Lewis, Ocado, Tesco, Westbridge furniture and Wren) (SAGHIRI et al., 2017). The three dimensions are summarized by the authors as follows:

> (i) Channel stage: refers to the value-adding journey (pre-purchase, payment, delivery, and return), where each stage may include numerous
> channel types and agents – (ii) and (iii) below.
> (ii) Channel type: refers to various ways or mediums available in each stage of the value-adding journey to provide the product/service and information. They may include stores, websites, social media, emails, ads, catalogs (for pre-purchase); cash, cards, coupons, loyalty cards (for payment); stores, home delivery, collection points (for delivery); post, stores, and drop-off points (for return).
> (iii) Channel agent: refers to the entity/firm that manages the channel type in each channel stage (e.g. manufacturers, digital retailers, physical retailers, logistics providers, price comparison websites, and credit institutions. (SAGHIRI et al., 2017, p. 58)

Coupons, cited by Saghiri et al. (2017), for instance, are used differently online and offline according to Liu (2019). According to the author, online retailers provide long-term and deep discounts or coupons, while physical stores only offer temporary promotions. At the same time, the

Mobile Apps seem to be changing this reality, and the author suggests to investigate this. So, the integration of these discount strategies is still need scientific exploitation.

The logistics service quality, considering condition, availability and timeliness dimensions, was investigated in two scenarios: buy-online, pick-up-in-store (BOPS), and buy-in-store-ship-direct (BSSD), and they found out that omnichannel consumers are unique, and in their case, timeliness is decisive to satisfaction and loyalty (MURFIELD et al., 2017). BOPS strategy is not suitable for every product. Gao and Su (2017) found that items that have good sales in physical stores is a good example, since it can lead consumers of these items to purchase online, reducing traffic in physical stores.

Although different in practice, some authors seem to use cross and omnichannel as synonyms. In order to mitigate such misunderstanding, Beck and Rygl (2015) categorize the terms, considering that in omnichannel the retailer offers all channels widespread (currently physical store, catalog, telephone, online shop and mobile shop). Full interaction in customers point of view and full control over channel integration in retailers point of view are the things that, according to them, make the difference in omnichannel.

Table 2, provided by Beck and Rygl (2015, p. 173), brings a taxonomy of multiple channel retailing, where one can perceive the divergence among the three terms. This taxonomy classifies multiple channel retailing considering two dimensions: (1) interaction triggered by customer, or integration controlled by the retailer; and (2) number of channels considered.

Table 2- A taxonomy of multiple channel retailing

Concept	Dimension 1	Dimension 2
Multi-channel retailing	No interaction can be triggered by customer	More than one channel or all channels widespread at that time
	No integration is controlled by retailer	
Cross-channel retailing	Partial interaction can be triggered by customer	More than one channel or all channels widespread at that time
	Partial integration is controlled by retailer	
Omnichannel retailing	Full interaction can be triggered by customer	All channels widespread at that time
	Full integration is controlled by retailer	

Source: Adapted from BECK and RYGL (2015, p. 173).

Both the full interaction and integration in all possible channels seem to be in the core of any omnichannel strategy. In an attempt to simplify the understanding the difference of the three strategies, which can in some situations be hybrid, Beck and Rygl (2015) contribute with a categorization tree, which can be seen in Figure 2.

Figure 2 - Categorization Tree in Multi-, Cross-, and Omni-Channel retailing
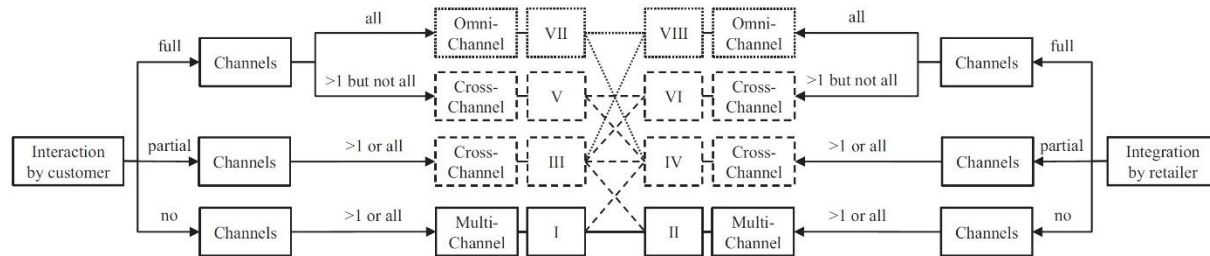
Source: Beck and Rygl (2015, p. 175).

In a four-stage Delphi study with eighteen retail experts, participants agreed that omnichannel will become ordinary over the next ten years, with no distinction between channels (BRIEL, 2018), that is, to compete, retailers need to adapt and offer a holistic consumer experience, not only the right products. In addition, Briel´s (2018) study found that retailers need to reinvent themselves, start to consider each point of contact with consumers (the touchpoints) as an important location of activity, as well as personalization and mobile use will be imperatives and in the core of this experience.

For Acquila-Natale and Chaparro-Peláez (2019) the integration of channels can be measured observing the following six areas: customer touchpoints, channel consistency, integrated promotion, integrated access to information, integrated fulfilment and integrated customer service.

2.3 CONSUMER BEHAVIOR AND PERCEIVED VALUE IN OMNICHANNEL

Channels impact so much in consumer behavior, that people are likely to purchase fewer vices, that is, to control themselves more when they shop online, while they purchase more vices when they shop in a physical grocery store, since the first presents a symbolic presentation of the product to the consumer, while the second shows a more vivid presentation, increasing the consumer´s desire to seek for an instant gratification (HUYGHE et al., 2017).

When considered multi-channel environments, a study considered a perspective that includes what consumers bring, what they encounter, and what they do when they use multiple channels (DHOLAKIA et al., 2010). The authors advocate that there are few researches considering consumer behavior in multi-channel, so, if one considers that omnichannel is a much more recent theme, the amount of studies with consumer behavior in omnichannel environment is even smaller.

In order to compete in the age of omnichannel, Brynjolfsson, Hu and Rahman (2013) share that the retail sector needs to shift from a transaction and delivery based model towards a "concierge" model, which is oriented to assist the consumer.

Omnichannel practices, enabled by technology affects consumers and businesses process in several ways (LAZARIS; VRECHOPOULOS, 2014, p. 5). Dholakia et al (2010) agree that a shift in channel represents a shift in consumer behavior.

The omnipresence of channels and media, integrating physical and online environments cause confusion in the consumer's mind (BROILO; ESPARTEL, 2016). And this confusion can lead to negative perceptions and consequences which should be avoided.

Juaneda-Ayensa et al. (2016) focus on customer behavior of the new conception, omnichannel. They emphasize that the real interaction breaks barriers between channels and explain this new behavior with some factors, and test this in Zara using UTAUT2 – Unified Theory of Acceptance and Use of Technology - model adapted to an omnichannel environment and also external variables applied in the extension of UTAUT2 personal innovativeness and perceived security. Their results showed that personal innovativeness, effort expectancy, and performance expectancy affect consumer´s intention to purchase in omnichannel, while habit, hedonic motivation, social influence, and perceived security don´t.

The topic concerning mobile decision making has stood out. It is interesting to note that a change in channel also means a change in the consumer behavior (DHOLAKIA et al, 2010), mainly due to the advance of new technologies that have changed the consumer habits, as Juaneda-Ayensa et al (2016) discussed about in the new reality (omnichannel) and this must receive a special attention. Wang et al (2015) argue that there is little research on the impact of M-shopping, the shopping or buying on a mobile device, although this practice has increased. The consumer dynamics in mobile retailing was also investigated in a qualitative study that found that the mobile shopping experience is more convenient for consumers in a cognitive way, so it pushes consumers to change their behavior, shifting from the e-channel to the mobile one (PANTANO; PRIPORAS, 2016). In this sense, the

authors defend: "…retailers strongly established online service competences should revise their capabilities to promptly reply to the emerging mobile challenge, by developing mobile service competences, and integrating and synthesizing physical retail settings with mobile opportunities and functionalities" (PANTANO; PRIPORAS, 2016, p. 554).

In their paper, testing the adoption of technology in the fashion industry and considering omnichannel strategy, Juaneda-Ayensa et al. (2016) develop a theory of use and acceptance of technology in an omnichannel context, which considers hedonix motivations, performance expectancy, effort expectancy, social influence, habit, security, and innovativeness.

Understanding how consumers can deal with the ubiquitous information is highlighted once it can create a different kind of demand: "A challenging dimension of the omni-channel distribution process is that different sales channels create separate demand streams which are distinct in terms of order size, delivery requirements, and customer expectations" (ISHFAQ et al., 2016, p. 551). Another concern to this point is show consumers respond to the integrated inventory information and how it impacts on satisfaction and loyalty (MURFIELD et al., 2017).

To consider the relevant dimensions and variables in order to start a research concerning consumer behavior in omnichannel, it becomes relevant to check which dimensions and variables were used in multi-channel (DHOLAKIA et al., 2010), and then adapt them contemplating the ubiquity brought by the new reality.

Dholakia et al. (2010) explain that the channels can be categorized in: purchase vs. information; physical vs. virtual; mobile vs. stationary (accessibility); synchronous vs. asynchronous (type of communication); fixed vs. customizable (nature of their interface); cost vs. convenience; easy switch vs. hard switch (from one to another); ephemeral vs. permanent customer history; and flexible vs. static.

According to Dholakia et al. (2010, p. 89), the consumers dimensions are: (1) what they bring (goals, values, memory, perceptual biases, categorization, traits, emotion, self-efficacy and group affiliation); (2) what they encounter (priming, ability for co-creation, ability to customize, ease of processing, variety perceptions, stimulation/arousal; sensory and haptic factors; design factors and social influences; and (3) what they strive for and do (pre-purchase search; choose; purchase; experience; consume; post-purchase search; identify; advocate; returning purchases; and protests).

A study investigated the impact of logistics service quality on the omnichannel consumer satisfaction and loyalty was carried out to fulfill a gap in B2C relationships, which reinforced a

tendency of a more consumer-oriented supply chain research (MURFIELD et al., 2017). The framework is provided below (Figure 3).

Figure 3 - Impact of logistics service quality on consumer satisfaction and loyalty in an omnichannel environment
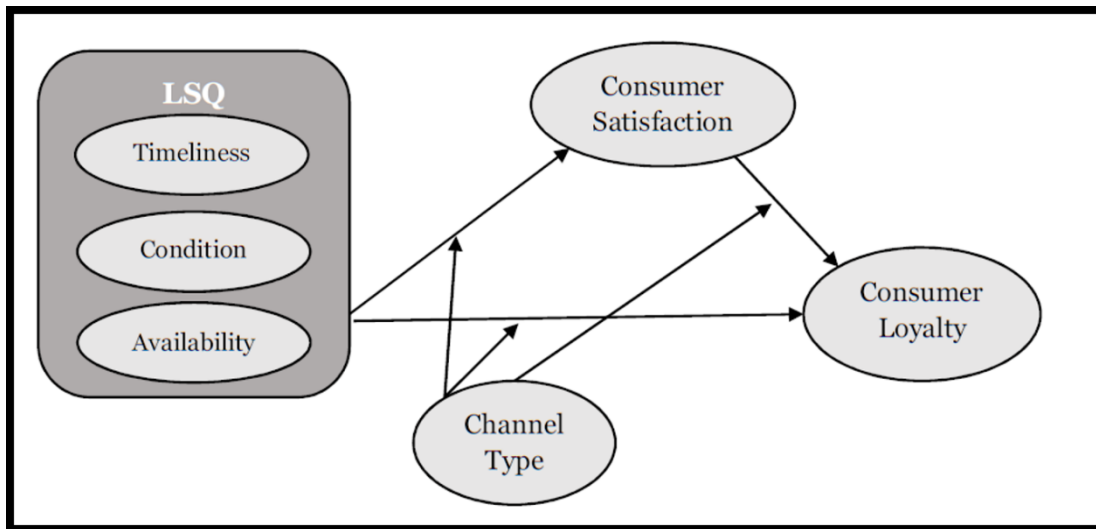
Source: Murfield et al. (2017, p. 53).

When it comes to satisfaction in this new context, Kumar et al. (2017) suggested that it should be measured at different points of the buying journey, rather than merely measuring overall satisfaction.

Another result concerning omnichannel was found by Chatterjee and Kumar (2017): consumers of durable products are willing to pay higher prices for similar products on websites of omnichannel retailers than in purely online retailers due to the ease of return in physical stores.

As I have seen, the results showed that omnichannel consumers are different and behave in a different way from other consumers. For instance, their intention to purchase is affected by personal innovativeness, effort expectancy, and performance expectancy, but not by habit, hedonic motivation, social influence, and perceived security (JUANEDA-AYENSA et al, 2016); they prioritize time over the other dimensions, although the other two dimensions considered by the study (condition and availability) should not be ignored (MURFIELD et al., 2017), and are willing to pay higher prices for similar products (CHATTERJEE; KUMAR, 2017).

2.4 CHANNEL-RELATED SCALES

After theoretically reviewing the term omnichannel and assuring the urgency of more studies concerning it, this session brings the channel-related scales, in order to help building the proposed scale.

Since this thesis considers the first research priority of the Marketing Science Institute, which is: "Quantitative models to understand causality, levers, and influence in a complex world" and one of its topics: "Understanding "omni-screen" and "omni-channel" drivers of customer decision making and behavior" (MSI, p. 4, 2016). It also contemplates the third priority: "Making sense of changing decision process(es)" (MSI, p. 8, 2016) and four of its topics:

> **How** does mobile change decision making and behavior? What is the impact of mobile on: search, networks, choice, behavior, the overall journey/path to purchase — and specific contexts such as complex decisions, finance, health, pricing, and payment?
> **How** is brand consideration and evaluation different in multi-channel environments or on different devices or screens? How do we know when the frame of reference for consumers is changing in a way that reshapes how they view a brand?
> **Understanding** how customers deal with large amounts of ubiquitous information about everything. We need more research on decision simplification heuristics and processing patterns, given this overwhelming amount of information and stimuli.
> **To what extent** do customer perceptions and experiences spill over from one domain or context to another? Does a customer's experience with a provider in an unrelated category influence their expectations of and experience with your brand? (MSI, p. 8 - 9, 2016)

In 2018, it continues being on of the marketing priority topics, presented as "The Rise of Omnichannel Promotion and Distribution" (MSI, 2018). One critical point is that, since omnichannel is more complex, simultaneous and integrated than multi-channel, and it aims at an overall retail customer experience, it is recommended that investigations that took place considering multi-channel expand considering the impacts of this new scenario in companies performance and consumer behavior considering channel variations (VERHOEF; KANNAN; INMAN, 2015).

In an environment where the customer has been using technologies such as laptops, tablets and mobile phones and has become more self-assured, there has been a concern towards the return management in omnichannel: "the moderating effects that influence the level of product return rates experienced pertaining to omni-channel retailing. Further, the emergence of new return channels brings questions for the optimal network design that offer high accessibility to customers at optimal return logistics cost" (BERNON; CULLEN; GORST, 2016, p. 601).

In the perspective of Watson et al (2015), more research could check the integration of the different theoretical approaches, contingency of the explanatory power of constructs and theories on contextual factors, role of other constructs, and integration of web-based relationship metrics.

The proposed scale is seeking to advance with theory and construct in the behavioral-based approach (WATSON et al., 2015) of marketing channels, and considering "understanding 'omni-screen' and 'omni-channel' drivers of customer decision making and behavior" (MSI, p. 4, 2016), and also, the rising of omnichannel promotion and distribution (MSI, 2018). Since a scale for measuring omnichannel has not been found in literature, the starting point was the Cross-Channel Integration (CCI) scale (LI et al., 2017), along with omnichannel characteristics seen in the theoretical background (VERHOEF et al, 2015; HÜBNER; WOLLENBURG; HOLZAPFEL, 2016; JUANEDA-AYENSA et al, 2016; BECK; RYGL, 2015). The proposed indicators were developed based on an upgrade of the Multichannel Integration Scale from Frasquet and Miquel (2017), Cross-Channel Integration (CCI) scale (LI et al., 2017), Channel Integration Index (OH et al., 2012).

First, Frasquet and Miquel (2017) show that channel integration has two dimensions: reciprocity, with ten items; and coordination, with eight items. They measure MCI (multichannel integration) in the retail apparel sector of Spain and the United Kingdom.

The Cross-channel Integration (CCI) scale used by Li et al. (2017) has ten items (CCI1 – CCI10), and their paper seeks to understand customers´reaction to CCI in omnichannel retailing. They collected data using a popular online survey platform in China. They recommend researchers to extend studies in this field, once they admit the possible existence of other factors that can shape customers´ reaction to CCI in an omnichannel retailing scenario. This ten-item scale was the starting point for the proposed scale of this thesis.

The Channel Integration Index (OH et al., 2012) brings the six routines used construct this integration capability in a firm, which they measure on a 10-point scale. These six routines are: (1) Integrated promotion, (2) integrated transaction information management, (3) integrated product and pricing information management, (4) integrated information access, (5) integrated order fulfillment, and (6) integrated customer service. This index was tested using a survey with 125 multichannel retailers in Singapore.

Also, Porto and Okada (2018) developed and validated a similar scale which this thesis proposes, however, it seeked to understand the cross-channel consumer behavior (CCB) and its benefits – not omni. They dedicate the fact that online and offline channels are both used in the same

purchasing process to the mobility, possible due to the use of mobile devices. Their scale has 9 items, divided into three latent constructs, being simultaneous information searches, product/price comparisons, and interactions with the retailers/manufacturers.

Although there are several similarities between the scales beforementioned, they still lack on considering the full interaction and integration in all widespread channels (BECK; RYGL, 2015). And although Acquila-Natale and Chaparro-Peláez (2019) measured the integration of channels considering an omnichannel environment with a mystery shopper technique, there is still a lack of a scale for measuring omnichannel perception in literature, considering full interaction and integration of all channels in the customer´s point of view, once they did not consider it.

3   METHODS

In order to achieve the proposed objectives, developing and validating a scale for omnichannel perception, both qualitative and quantitative approaches were necessary. Accordingly, it started with (1) interviews to form Ladders using means-end theory in order to reinforce theory; then it was purified by (2) a panel of experts; to finally be tested by (3) three rounds of online surveys. In this chapter, the nature of the proposed study is presented, as well as the collection and analysis methods used, along with their justifications.

3.1 RESEARCH TYPE

The present study is exploratory, since its main goal is to help the understanding of a problem, situation, context faced by the researcher in a flexible way (MALHOTRA, 2019). Since the study proposes to better understand consumer responses to omnichannel, which is a relatively new concept in the channel literature, the exploratory type seems to be the most suitable one.

Research in multi and omnichannel can support professionals to build a portfolio of metrics on channel coverage, contributions from all partners, and sustainability of partnerships (AILAWADI; FARRIS, 2017).

The two main phases, the qualitative and quantitative, are presented as follows. It is important to emphasize that the items were picked up and adapted from (1) the literature, along with (2) the Laddering results and supported by (3) the panel of experts. So, these three sources were supposed to help forming the items for the three survey rounds that later attempted to measure omnichannel perception.

3.2 RESEARCH PHASES

Two phases of the study were carried out. The first one is qualitative, using the Laddering Method, while the second one is a quantitative research using three online surveys.

In the omnichannel field, Krafft et al. (2015) suggest that there is greater openness in large journals for research with more qualitative and experimental approaches. For Kim, Park and Lee (2017), there is a lack of detailed studies explaining the psychological mechanism on the choice of

BOPS, when a consumer buys online and picks up in store. As one can notice, the same happens to BSSD, when the person buys in a physical store and ships direct to home, and all the other possible structures of omnichannel. This way, not only one structure was covered, but a general view of omnichannel.

To help understanding the steps that were undergone, Figure 4 shows the research design that were carried out.

Figure 4 - Research Design
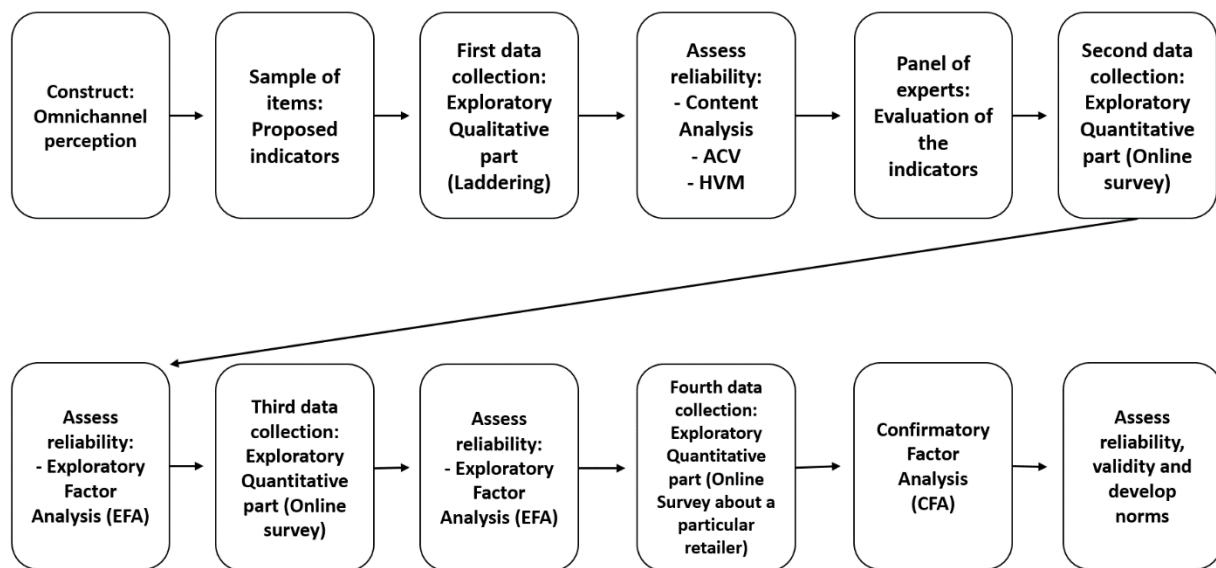
Source: Developed by the author, 2019, based on Churchill (1979) and Rossiter (2011).

The first phase was necessary in order to build the construct of omnichannel. The concern to build a reliable and valid construct begins with the attributes of the objects to be measured, with no specific rules (CHURCHILL, 1979). The author explains it is valid when it does score different on that specific characteristic it is supposed to measure, and reliability gives only a negative evidence of the validity of the measure, it is reliable "to the extent that independent but comparable measures of the same trait or construct of a given object agree" (CHURCHILL, 1979, p. 65).

Churchill (1979) also suggests a procedure for developing better measures of marketing: (1) specify domain of construct; (2) generate sample of items; (3) collect data; (4) purify measure (with coefficient alpha factor analysis); (5) collect data; (6) assess reliability (coefficient alpha split-half

reliability); (7) assess validity (multitrait-multimethod matrix criterion validity); (8) develop norms (average and other statistics summarizing distribution of scores).

Based on validity, and in a nonstatistical way, the C-OAR-SE method was presented by Rossiter (2002) in order to develop scales to measure marketing constructs. The abbreviation stands for Construct definition, Object classification, Attribute classification, Rater identification, Scale formation, and Enumeration and reporting.

Showing that his method is more flexible than Churchill's one, Rossiter's (2011) C-OAR-SE seems to be more suitable to the necessary marketing measurement revolution, using highly content-valid measures. It allows to use a single-item measures for "basic" constructs as well as first-order components of "abstract" constructs; abandoning the "reflective" measurement model, with its associated statistical techniques of factor analysis and coefficient alpha, since the abstract constructs must be measured as "formative"; and also abandoning external validation methods, such as multitrait-multimethod analysis (MTMM) and structural equation modeling (SEM), while using internal content-validation of the measure itself in turn.

For Lund (2012), the combination of qualitative and quantitative different perspectives can produce a clearer panorama of the object of study. Accordingly, it seems that, for the purpose of this research, Churchill ´s (1979) and Rossiter´s (2011) procedures combined is more suitable, for instance, Rossiter (2011) was be used to guide the qualitative part. So, there were both nonstatistical and statistical approaches: (1) specify domain of construct; (2) generate sample of items; (3) collect qualitative data; (4) purify measure; (5) collect quantitative data; (6) assess reliability (coefficient alpha split-half reliability); (7) assess validity (multitrait-multimethod matrix criterion validity); (8) develop norms (average and other statistics summarizing distribution of scores).

The chronological development of this research was as follows. Before starting data collection, literature was used to raise relevant dimensions and variables in consumer behavior in omnichannel. To do so, Dholakia et al (2010) advised to check the items used in multi-channel researches and adapt them to omnichannel.

First, the qualitative exploratory stage, with 29 in-depth interviews, which were used in order to form the ladders from attribute, to consequences and then to values. Second, a panel of experts consisting of a total of 5 experts (2 national and 3 international ones) who have already published about omnichannel and have been cited in this thesis was created between July and August 2019.

After the qualitative interviews and the panel of experts, the quantitative phase started. The first quantitative wave, made with a questionnaire based on the literature, along with the interviews and panel of experts resulted in 54 questions, a total of 273 questionnaires was collected (considering at least 5 cases per question) in September 2019. Exploratory Factor Analysis of the results of the first questionnaire was run in early October, which resulted in 6 factors (previously "baptized"), which were complemented with the theory to make them more robust. Being (1) Benefits; (2) post purchase services; (3) channel synchronization; (4) omnichannel scenarios; (5) interaction; and (6) promotions.

The second quantitative wave was conducted in the last two weeks of October 2019. Questionnaire was reduced on 40 questions left, after results of the first EFA. To check for the influence of the order of questionnaires items, 125 questionnaires were built with randomized order of questions and 134 were built with the items following the order of their constructs. To run the second Exploratory Factor Analysis with enough cases, the databases were merged together, with a total of 254 valid cases. As one of the factors became very poorly represented in this analysis, we removed it and the best combination was 5 factors. These five factors were strongly relation with their observable variables, we were careful that all items had a load greater than 0.6 in VARIMAX Rotation.

The third and last quantitative waveis the result from the 5 strong factors, with a total of 19 questions. These five factors are: (1) Post-Purchase Services in Omnichannel; (2) Omnichannel Promotions; (3) BOPS; (4) Omnichannel Advantages; and (5) Interaction with the retailer. This last questionnaire was different from the others because it was specifically concerning the most cited retailer in all the previous questionnaires. Therefore, to conduct Confirmatory Factor Analysis, 10 cases per question were necessary. So, 190 respondents answered about this particular retailer.

Each of the phases briefly presented in this section is accurately described in the next sub-section, starting with the Qualitative Phase (3.2.1); Panel of experts (3.2.2); and, finally, the Quantitative Phase (3.2.3).

3.2.1 Qualitative Phase - Laddering Method

Attempting to assist in the understanding of new omnichannel retail scenarios, and in order to attend the demand of qualitative studies concerning omnichannel, a research technique that can be

powerful in marketing is Laddering. The starting point of this qualitative phase was the proposed indicators presented in Appendix 1.

Although this method is more frequently used to understand the real reasons consumers buy a good, not a service, laddering has already been used to understand the reasons why customers choose specific channel interactions along their customer journeys. It was used by Barwitz and Maas (2018), in Germany, Austria, and Switzerland, who interviewed specifically motor insurance customers.

3.2.1.1 Laddering Method – data collection

Laddering is a suitable technique, along with means-end chains (MEC) for marketing, especially in consumer behavior (GRUNERT; GRUNERT, 1995; OLIVEIRA; IKEDA, 2008), it can be useful to understand these scenarios, since they are recent, and the method allows an in-depth interview. The set of attributes and benefits in a qualitative laddering approach needs a sample of around 30 qualitative interviews (VRIENS, HOFSTEDE, 2000). But Oliveira and Ikeda (2008) explain that other authors defend a lower number of participants, as soon as the researcher evaluates the saturation and repetition of answers. For instance, the laddering reported by Ikeda et al. (2014) contained 15 respondents.

Thus, the first phase was thought to deepen qualitatively the real reasons why consumers have been purchasing their goods using more than one channel in the same purchase, that is, specially why they mix the online and offline channels. For this reason, the Laddering method seems to be the most adequate, using means-end chains (GUTMAN, 1982), where personal values are responsible for the decisions to buy a certain product.

With the purpose of accessing the structures of means-end theory, the Laddering method was developed by Reynolds and Gutman (1988). It uncovers a range of A-C-V, which are attributes (A), consequences (C) and values (V) (OLIVEIRA; IKEDA, 2008). Eliciting attributes important to the consumer, asking the preferences and especially questioning about why the issues are important are part of the interview (VRIENS, HOFSTEDE, 2000). It is clear that "why" must be repeated until the researcher finds the personal value related to the attribute. For Grunert and Grunert (1995) the means-end chains assume a basic hierarchical model where cognitive categories become part of a chain linking cognitive categories of concrete objects to abstract ones, such as values.

The data collection is basically an interview that can be either a soft laddering where the interviewee's speech is restricted, or a hard one, which is the one where the respondent needs to build the ladders one by one, coding with content analysis, using computer- assisted methods such as keyword-in-context lists, leftover lists, and insertion of codes into the raw text; and, finally, the analysis clustering the data and building hierarchical value maps, or hierarchical value map (HVM) (GRUNERT; GRUNERT, 1995).

The interview script, which was used for the Laddering step of data collection, is presented in Appendix 2. The questions were developed concerning the literature of omnichannel, with indicators developed based on the Cross-Channel Integration (CCI) scale (LI et al., 2017), along with omni-channel characteristics VERHOEF et al, 2015; HÜBNER; WOLLENBURG; HOLZAPFEL, 2016; JUANEDA-AYENSA et al, 2016; BECK; RYGL, 2015). These indicators, which were the starting point for the interviews, can be seen in Appendix 1.

3.2.1.2 Laddering Method – Content Analysis

After the data collection, coding with content analysis and the analysis clustering the data and building hierarchical value maps.

Considering that, Oliveira and Ikeda (2008) explain that the analysis starts with the content analysis, allocating parts with similar meaning in only one clause (guided by A-C-V); and with the interactions among the elements, an implication matrix is made putting the elements codes in lines and columns, and the number of times it takes to other element in the interior.

Finally, it is important to determine the orientation of dominant perceptions with analysis adding direct and indirect relations in A-C-V, being the ones with greater values the most important for marketing decisions (OLIVEIRA; IKEDA, 2008). The structure that was followed can be seen in Figure 5.

Figure 5 – Laddering Structure – Main steps
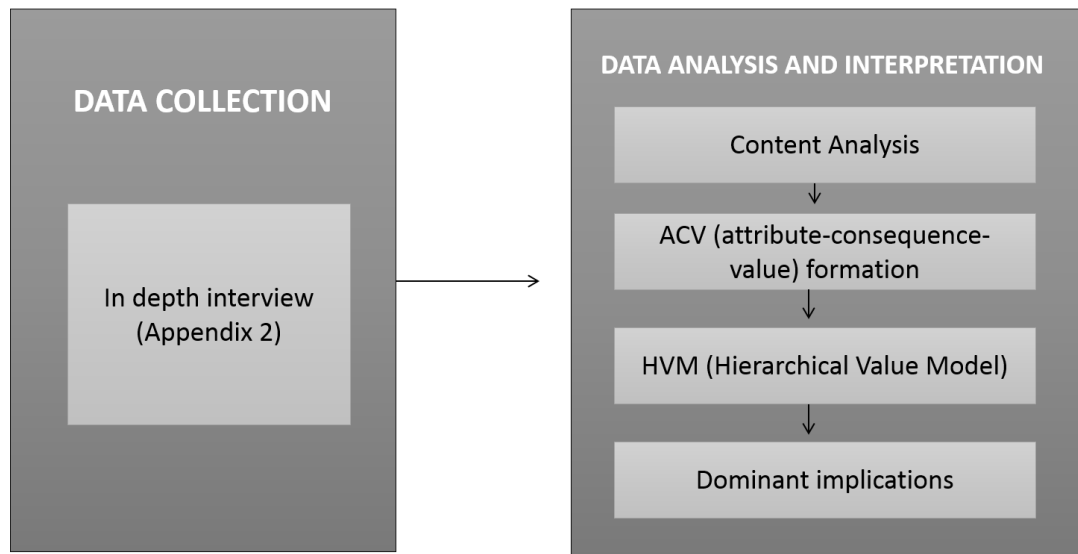
Source: developed by the author (2018), based on Reynolds and Gutman (1988)

The Laddering in depth interview script is presented in Appendix 2, which is expected to bring more reliability to the proposed indicators suggested in Appendix 1. Then, these indicators were used to build the Omnichannel perception scale which was tested in the subsequent quantitative phase.

The method chosen to this qualitative phase is suitable to understand how consumers perceive omnichannel in the Brazilian context. Since omnichannel is a new tendency in the country retail sector, laddering method was adopted in the attempt to understand the real perception and motivations. Reynolds and Gutman (1988) explain that the phases of laddering include data collection, data and content analysis, implication matrix, the construction of the Hierarchical Value Map (HVM). For this study, soft laddering is used, since it presents characteristics of an in-depth interview and refers to interviews and data collection techniques with little restriction of the respondent's natural flow of speech (GRUNERT et al.,1995).

The 29 in-depth interviews were carried out with the following criteria: the consumers interviewed had to be familiar with using several channels during the same shopping experience. The interviewees were contacted by telephone and invited to join the study. After the individual

interviews, which lasted about 45 minutes each, they were asked to indicate someone who also is familiar to the full interaction and integration of channels.

Subsequently, the interviews were transcribed, and analyzed using content analysis. Gutman (1982) explain that in order to code the responses, the researcher needs to group the words or expressions expressed by the participants into the three levels of a ladder: Attribute, Consequence, Value (A-C-V) sequence (REYNOLDS, GUTMAN, 1988, IKEDA et al., 2014). According to Rokeach (1973) attributes are concrete meanings, captured by physical or observable characteristics, while consequences are more abstract and related to the benefits of the attributes, and values are long-lasting convictions.

The profile of the respondents, containing gender, age and level of education can be seen in Table 3. It is also provided in Table 3 the number of ladders created by each interviewee. As it was explained before, the modest number of ladders per interviewee is justified because the subject is new, and because the attributes are not tangible (although they are observable), due to the nature of the studied phenomenon.

Table 3 - Profile of the respondents

Interviewee	Gender	Age	Level of education	Number of Ladders
1	Male	36 years old	College degree	4
2	Male	27 years old	Postgraduate	2
3	Male	42 years old	College degree	5
4	Female	30 years old	Postgraduate	4
5	Female	24 years old	Undergraduate	5
6	Male	40 years old	College degree	4
7	Female	33 years old	Postgraduate	3
8	Female	28 years old	College degree	4
9	Female	37 years old	Postgraduate	1
10	Female	35 years old	College degree	6
11	Female	25 years old	College degree	5
12	Male	57 years old	College degree	4
13	Female	29 years old	College degree	5
14	Female	24 years old	College degree	5
15	Male	35 years old	Postgraduate	3
16	Male	39 years old	College degree	2
17	Male	27 years old	College degree	6
18	Female	30 years old	Postgraduate	4
19	Male	21 years old	College degree	6
20	Male	34 years old	Postgraduate	5
21	Male	37 years old	Postgraduate	6
22	Female	23 years old	Postgraduate	6
23	Female	21 years old	College degree	4

24	Female	21 years old	College degree	4
25	Female	21 years old	College degree	2
26	Male	28 years old	Postgraduate	7
27	Male	32 years old	Postgraduate	4
28	Male	27 years old	College degree	4
29	Female	19 years old	Undergraduate	4

Source: developed by the authors, 2020.

These ladders were organized in the implication matrix, which is the structure that illustrates the amount of direct and indirect relations between the elements. That is, for example, how many times an attribute is linked to a consequence. It follows the pattern XX.YY, being XX the number of direct links and YY the number of indirect ones (REYNOLDS, GUTMAN, 1988). It usually creates either direct or indirect relations, not both.

The HVM, according to Reynolds and Gutman (1988) is where the most important relations are shown. When the same interviewee used the same relation, it was considered only once, to avoid bias (GENGLER; REYNOLDS, 1995). Since there were several terms that had only one relation to the other, they were not considered in the HVM, to avoid a confusion in the map and to respect a cut-off point of 2, which has been used in Laddering studies, such as the one by Gengler et al (1999).

3.2.2 Panel of experts

In order to understand if the questions raised from the literature and the exploratory interviews were in fact relevant to measure omnichannel perception, experts who have already published papers concerning omnichannel, and were cited in some moment during the thesis were contacted and invited to take part in the panel. This invitation can be seen in Appendix 4.

After this first contact, a total of 5 experts, being 2 national and 3 international ones, agreed to participate, and then a second e-mail with instructions was sent. The e-mail to the experts can be seen in Appendix 5. The panel was conducted between July and August 2019.

3.2.3 Quantitative phase - Survey

In order to test the new scale developed for measuring omnichannel use in a quantitative search, which was only be possible after the qualitative phase, with the Laddering results, a survey

was carried out with closed questions that have arisen from (1) the literature, (2) the Laddering results, and (3) the panel of experts.

The questionnaires contain closed questions with answers ranging in a 7-point Likert scale, being 1 – totally disagree and 7 – totally agree. It was supposed to be answered by consumers who have already used more than one channel in the shopping process.

3.2.3.1 Sampling

Malhotra (2019) explains that before defining the sampling, one needs to define the population. The only prerequisite for answering the questionnaire would be a person who has used more than one channel in a single shopping journey. With the selection of this convenient element chosen by the researcher, it can be considered a judgement sample, which is a sampling technique used when the researcher selects the elements from the population (MALHOTRA, 2019).

By convenience, undergraduate and postgraduate students were considered, due to the easy access to their e-mail addresses, where questionnaires were sent. A preference of higher educated participants was respected for our sampling, since they are more likely to have a multichannel purchase behavior, as Konus et al. (2008) mention.

Hair et al (2014) explain that for the Exploratory Factor Analysis, the minimum necessary is 5 (five) respondents per variable or question, which was used in the first and second round. However, for the Confirmatory Factor Analysis, at least 10 (ten) answers are necessary per variable or question, which was used in the third round. Since the number of variables of this new scale to test omnichannel perception varies in each round, the sampling also differed.

In the first round, there were 54 items, so 273 respondents were surveyed. In the second round, the construct was reduced to 40 questions, and then 254 valid questionnaires were considered. For the third round, 190 respondents answered the survey containing 19 items. The sample consisted exclusively customers who have had the experience to use more than one channel in the same shopping experience.

Missing cases were completely at random (MCAR), and they were processed using pairwise deletion process. According to Hair et al. (1998), this technique allows each variable correlation is computed for all the cases that have known values.

3.2.3.2 Data collection

For the quantitative phase of the present study, the data collection was conducted with a survey, using online questionnaires. The success of the data collection is linked to the quality and organization of the research.

The questionnaires, according to Triola (2005), seek to measure and evaluate phenomena. Hair et al (2009) complement that questionnaire is a set of pre-established questions developed with the purpose of measuring the opinions and characteristics of the respondents.

In order to facilitate the application of the questionnaire, and leading to a higher probability of answers, Churchill and Iacobucci (2009) suggest reducing the instrument, which also brings benefits to edit and tab the answers.

Before applying the first questionnaire to the sampling consisting of consumers who have used more than one channel in the same shopping journey, pre-tests with the same public of the research were conducted, in order to ascertain that the questionnaire has been understood by them and clearing up any foreseeable problem.

3.2.3.3 Data analysis

In the data analysis, statistics were used, which Collins and Hussey (2005) conceptualize as the set of methods and theory applied to quantitative data to aid in decision making. In order to facilitate the analysis of the collected data, SPSS Statistical Software and Lisrel Software Systems were used. The first one was used to the EFA, while the second one to the CFA. Both analyze the data and provide tables and graphs to the researcher. In writing about SPSS, Dewberry (2004) finds that to produce a wide variety of descriptive statistical analyzes it is necessary to define the variables, to type and to transform the data as necessary.

To sum up, the present study applied two analysis techniques:

a) Univariate analysis: frequency distribution and means;

b) Multivariate analysis: Exploratory Factor Analysis; Confirmatory Factor Analysis

In order to characterize the sample, the respondents' profile was presented by frequency distribution and means. Frequency shows how many answers for each variable are found and the mean is a measure of central tendency (DEWBERRY, 2004).

Barbetta (2008) defends that the variables are correlated when they are oriented in the same direction. The direction between the variables usually expresses a correction coefficient, which, according to Dewberry (2004) is positive when the result is from 0 to 1, is a negative association of for from -1 to 0 and if the result is 0 there is no association. To analyze the influence of the independent variable on the dependent variables, regression analysis was used.

The factor analysis was also be performed to verify the reliability of the model. The factorial analysis is used to limit the number of variables, that is, when there are a large number of variables, this analysis helps to visualize which are not important and can be withdrawn from the study (DEWBERRY, 2004). Malhotra (2019) explains that the factor analysis is a procedure to reduce and summarize the data.

According to Hair et al (2009) Exploratory Factor Analysis (EFA) explores the data and provides how many factors are necessary to better represent the data variance. The alpha coefficient, or Cronbach's alpha, which according to Dewberry (2004) can be used to examine the reliability of the measures, was calculated, it examines the average correlation between the various items of a questionnaire. In the EFA, the dimensionality, analyzed by Principal Component Analysis (PCA) is used to evaluate the total variance of the data, in order to maximize the total explained variance, reducing the data (FÁVERO et al, 2009). The author explains that the VARIMAX orthogonal rotationh reduces the number of variables with high loads of a factor. Also, to verify the reliability of the model, the Kaiser Meyer-Olkin-Measure of Sampling Adequacy (KMO) and Bartlett's test of Sphericity were calculated. Measurement of data reliability, according to Hair et al. (2009), KMO may range from 0 to 1, in which the range between 0.60 and 0.70 is at the lower limit of acceptability. Also, the ideal is that the Alpha Coefficient (Cronbach's Alpha) is above 0.60.

Besides the Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) was also necessary in order to confirm or reject the theory of the research (HAIR et al, 2009). The authors classify the CFA indices as absolute fit indices, relative fit indices and parsimony fit indices. The absolut fit indices show how well the model reproduces the data (HAIR et al, 2009), and it was necessary to use Chi-Square (X^2) and Goodness-of-fit index (GFI); while relative fit indices evaluate how well the model adjusts itself to some alternative reference model; and parsimony fit indices shows which model, comparing with others, is the best, but even the authors say they are controversial, and they were not used. A summary of the analysis that were performed in this study can be observed in Table 4.

Table 4 – Summary of the research analysis of the quantitative phase

Function	Resource
Sample profile	Means and frequency distribution
Exploratory Factor Analysis (EFA)	- KMO and Barlett´s test - VARIMAX - Cronbach's Alpha - Means and Standard deviation
Confirmatory Factor Analysis (CFA)	- Influence of variables - Quality of the fit - Chi-Square test (X²) - Goodness of fit indeces - Reliability - Average Variance Extracted (AVE)

Source: Developed by the author, 2019.

For the CFA, Chronbach's Alpha is not enough to measure reliability. So, in this case, the reliability was calculated after the Composite Reliability Equation shown in Equation 1.

$$\frac{\left(\sum_{i=1}^{p} \lambda_i\right)^2}{\left(\sum_{i=1}^{p} \lambda_i\right)^2 + \sum_{i}^{p} V(\delta)}$$

Equation 1- Composite Reliability
Source: Adapted from Hair et al, 1998.

`   In order to measure the reliability of the constructs, the equation is the square root of the sum of the Lambda (λ), which is the standardized loading for each indicator divided by the square root of the sum of the Lambda ((λ) plus the sum of the $V(\delta_i)$ = variance of the error term for the ith indicator.

Not only reliability needs to be measured, but also the variance of the constructs. In order to measure the variance of the constructs, the Average Variance Extracted (AVE) is a measure to evaluate the convergent validity. It measures the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error. The AVE Equation is presented in Equation 2.

$$AVE = \frac{\sum \lambda_i^2}{\sum \lambda_i^2 + \sum_i \mathrm{var}(\varepsilon_i)}$$

Equation 2- Average Variance Extracted (AVE)
Source: Adapted from Hair et al, 1998.

To better evaluate the discriminant validity in which the diagonal values are occupied with the variance of the constructs and the cells below the diagonal one contain the shared variance of the constructs, Fornell and Larcker (1981) developed a matrix. It suggests that the discriminant validity is indicated when a latent variable accounts for more variance in its indicator variables than the variance it shares with the other constructs of the model.

4 RESULTS AND DISCUSSION

This section brings the results from the Qualitative Phase (4.1); from the Panel of experts (4.2); and, finally, from the Quantitative Phase (4.3) with its three rounds of surveys. It also brings a discussion of all the phases aforementioned.

4.1 RESULTS AND DISCUSSION OF THE QUALITATIVE PHASE

This section presents the results and discussion of the means-end study developed with 29 interviewees. The sampling profile is presented in Table 3. After the content analysis, it formed a total of 30 elements: 8 attributes, 10 consequences and 12 values, all of them supported by literature. However, since it is a new subject and the respondents were not used to think about the real reasons why they choose to move from one channel to another, building ladders was a challenging task. Some answers were not considered to build a ladder because they did not behave in a A-C-V sequence to form a ladder, but they are presented in textual form.

4.1.1 Implication Matrix

With the content analysis, it was possible to group the answers in the three levels of laddering. Then, they were coded to ease the Implication Matrix. The attributes, consequences and values with their respective codes can be seen in Table 5. Besides that, the conceptual definition of each A-C-V element and respective reference is provided. It is important to highlight that the list of values used for this research was the one proposed by Schwartz et al (2012).

Table 5- List of codes

Code	Attribute	Conceptual definition	Reference
ATTRIBUTES			
1	M-shopping	Shopping or buying with a mobile device	Wang et al (2015)
2	Movement across channels	Consumer moving seamlessly across channels during the shopping journey	Verhoef et al (2015)
3	Discrepancy between channels	Consumer experiencing poor channel flows in multichannel services	Banerjee (2014)
4	Reviews from other consumers	User generated content about products and services, including online product reviews and social media posts	Wedel and Kannan (2016)
5	Consistency between channels	Alignment between the retailer channels (e.g. services, promotion, price, loyalty program, assortment)	Cao and Li (2015)
6	Interaction with the retailer	Consumer interaction with retailers through multiple channels and media	Lemon and Verhoef (2016)
7	Information of availability	Real-time store inventory information	Melacini et al (2018)
8	In-store mobile search	Specific use of the mobile device for online research while inside a physical store	Grewal et al (2018)
CONSEQUENCES			
9	Saving money and/or time	Spending as little time and/or money as possible in shopping	Harris et al (2018)
10	Comparison	Consumers engaging in comparison shopping to find the best offer	Hall and Towers (2017)
11	Convenience	The extent to which the purchasing process is efficient and effortless	Hammerschmidt et al (2016)
12	Choice confidence	The extent to which consumers feel that they arrived at the best purchase decision	Flavián et al (2016)
13	Innovativeness	Opportunity to try new and different products and seek out new experiences	Konus et al (2008)
14	Consumer empowerment	The extent to which consumers have control over their shopping processes	Zhang et al (2018)
15	Barriers between channels	Consumer perceptions of barriers when moving from one channel to another	Huré et al (2017)
16	Trust in retailer	Consumer willingness to rely on the retailer	Frasquet et al (2017)
17	Dissatisfaction	Feelings of unfulfillment signaling that an encounter was not as good as it was supposed to be	Bougie et al (2003)
18	Retailer image	Holistic judgment of the retailer	Bezes (2013)
VALUES			
19	Achievement	Success according to social standards	Schwartz et al (2012).
20	Hedonism	Pleasure and sensuous gratification	Schwartz et al (2012).
21	Self-direction-action	Freedom to determine one's own actions	Schwartz et al (2012).
22	Power-resources	Power through control of material and social resources	Schwartz et al (2012).
23	Stimulation	Excitement, novelty, and change	Schwartz et al (2012).
24	Security-personal	Safety in one's immediate environment	Schwartz et al (2012).
25	Universalism-concern	Commitment to equality, justice, and protection for all people	Schwartz et al (2012).
26	Humility	Recognizing one's insignificance in the larger scheme of things	Schwartz et al (2012).

27	Face	Security and power through maintaining one's public image and avoiding humiliation	Schwartz et al (2012).
28	Universalism-nature	Preservation of the natural environment	Schwartz et al (2012).
29	Conformity-interpersonal	Avoidance of upsetting or harming other people	Schwartz et al (2012).
30	Benevolence-caring	Devotion to the welfare of ingroup members	Schwartz et al (2012).

Source: developed by the author, along with Gasparin, 2020.

Accordingly, after the 8 attributes, the interviews made clear 10 consequences related to the benefit perceived by them, and then they finally expressed 12 values, that is, what motivated them in the use of this full integration and interaction of channels in the retail industry. These 30 elements are shown along with some example of quotes from the interviewees in Table 6.

Table 6 - Examples of quotes from interviewees

	Elements	Examples
Attributes	M-shopping	Interviewee 5: "mobile allows you to use channels "anytime, anywhere".
	Movement across channels	Interviewee 18: "(I use) online store due to more variety of price and payment, but I use the physical store to try it (the product) on".
	Discrepancy between channels	Interviewee 25: "because it varies a lot, and in the virtual stores it is usually cheaper".
	Reviews from other consumers	Interviewee 26: "The good thing about having this research stage is that you find other people's opinions and their experiences with the products".
	Consistency between channels	Interviewee 26: "Any channel you want to buy you will find the same price for the same product".
	Interaction with the retailer	Interviewee 4: "I have been talking to physical store sellers on WhatsApp (social networks)".
	Information of availability	Interviewee 6: "in the pharmacy, for example, they say it (the product) is not available there, but they tell you where it is".
	In-store mobile search	Interviewee 21: "inside a physical store I have already looked for that same thing on the internet".
	Elements	**Examples**
Consequences	Saving money and/or time	Interviewee 22: "I feel very good when I take an opportunity, looking for (better prices) and not settling, to pay cheaper".
	Comparison	Interviewee 4: "comparing prices and quality".
	Convenience	Interviewee 17: "It is easier for me, it is a matter of practicality".
	Choice confidence	Interviewee 11: "I feel like I made the right purchase".
	Innovativeness	Interviewee 22: "sometimes I end up trying products that I would not buy without this (discount due to the movement across channels)"
	Consumer empowerment	Interviewee 24: "So I get to a physical store knowing what to look for, what to ask…".
	Barriers between channels	Interviewee 20: "It is very difficult to find a product (due to discrepancy between channels".
	Trust in retailer	Interviewee 16: "I use to look (information) from all the retailers (social media, direct contact, in person)".
	Dissatisfaction	Interviewee 17: "Sometimes I think that retailers treat themselves as competitors (among channels)".

	Retailer image	Interviewee 20: "it gives me the impression of a well-prepared retailer, that invested in this (the consistency between channels), that is concerned about the information availability, of this exposure".
	Elements	**Examples**
Values	Achievement	Interviewee 5: "I feel very happy with a better price, it is an achievement".
	Hedonism	Interviewee 11: "I like to spend money with things that bring me well-being".
	Self-direction-action	Interviewee 17: "I feel freedom having this power of choice".
	Power-resources	Interviewee 23: "to check where it has the best cost benefit".
	Stimulation	Interviewee28: "I get really excited".
	Security-personal	Interviewee 5: "Not to regret later".
	Universalism-concern	Interviewee 9: "Also for the sake of paying a fair price".
	Humility	Interviewee 10: "I don't like to expose myself a lot, I am a shy person".
	Face	Interviewee 10: "I don't want to have the feeling of being cheated".
	Universalism-nature	Interviewee 13: "I think about sustainability. I think about the logistical cost, if the product is close to me..."
	Conformity-interpersonal	Interviewee 27: "I do not feel good (looking for something using the mobile while in the physical store), especially if there is a seller by my side…"
	Benevolence-caring	Interviewee 28: "Thinking about helping the seller (interacting with the retailer using other channels)"

Source: developed by the authors, 2020.

After the content analysis, an implication matrix was built, in order to organize the relations in direct or indirect links between the beforementioned elements. The numbers before the dot are direct links and the numbers after it are indirect ones. For instance: the attribute which is element Code 2 (Movement across channels) was 17 times directly related to the consequence Code 9 (Saving money and/or time). So, in the implication matrix, the relation between them is 17.0. Another example is the indirect relation between the attribute Code 4 (Reviews from other consumers) and the value Code 24 (Security-personal), which was repeated 5 times, represented by the relation 0.5. All the.

Also, in Appendix 3, one can see the full content analysis Table, with all the ladders built, along with the quotes from interviewees. All the A-C-V relations resulted from the interviews can be seen in Table 7, where the cut-off point of 2 relations is highlighted.

Table 7 - Implication Matrix

	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	3.0		10.0	1.0				1.0			0.1	0.4	0.3		0.3	0.4						
2	17.0	11.0	11.0	19.0	2.0	4.0		1.0		1.0	0.1	0.10	0.9	0.13	0.3	0.26	0.1	0.1		0.2		
3	1.0	3.0			1.0	6.0		2.0	2.0			0.8	0.1			0.4			0.2			
4		2.0		4.0								0.1				0.5						
5	2.0		3.0	2.0						1.0		0.2	0.1	0.1		0.4						
6	1.0	1.0	1.0	1.0				1.0		1.0		0.1			0.1	0.2			0.1			0.1
7	2.0												0.1		0.1							
8	2.0	1.0	1.0			2.0						0.1	0.1			0.3					0.1	
9											2.0	7.0	2.0	7.0	1.0	8.0				1.0		
10												5.0	3.0	2.0		6.0	1.0					1.0
11												7.0	7.0	1.0	6.0	5.0						
12												3.0	3.0	4.0		15.0			1.0	1.0		
13															1.0	1.0						
14																4.0		1.0				
15												3.0				2.0			2.0		1.0	
16																3.0						
17												2.0										
18													1.0			4.0						

Source: Developed by the author, 2020.

It is important to emphasize that only the elements that allowed the construction of the sequence A-C-V were considered in this phase, so elements were cited more times than the amount of times reported in the matrix.

4.1.2 Hierarchical Value Map (HVM)

After the content analysis and the implication matrix, the HVM was built in order to show the links between the elements. Colors were used to better distinguish the links. Besides, the thickness of the lines depends on how big the connection is, that is, the thicker the line, the bigger the connection, proportionally. One can see the HVM in Figure 6.

Figure 6 - Hierarchical Value Map (HVM)
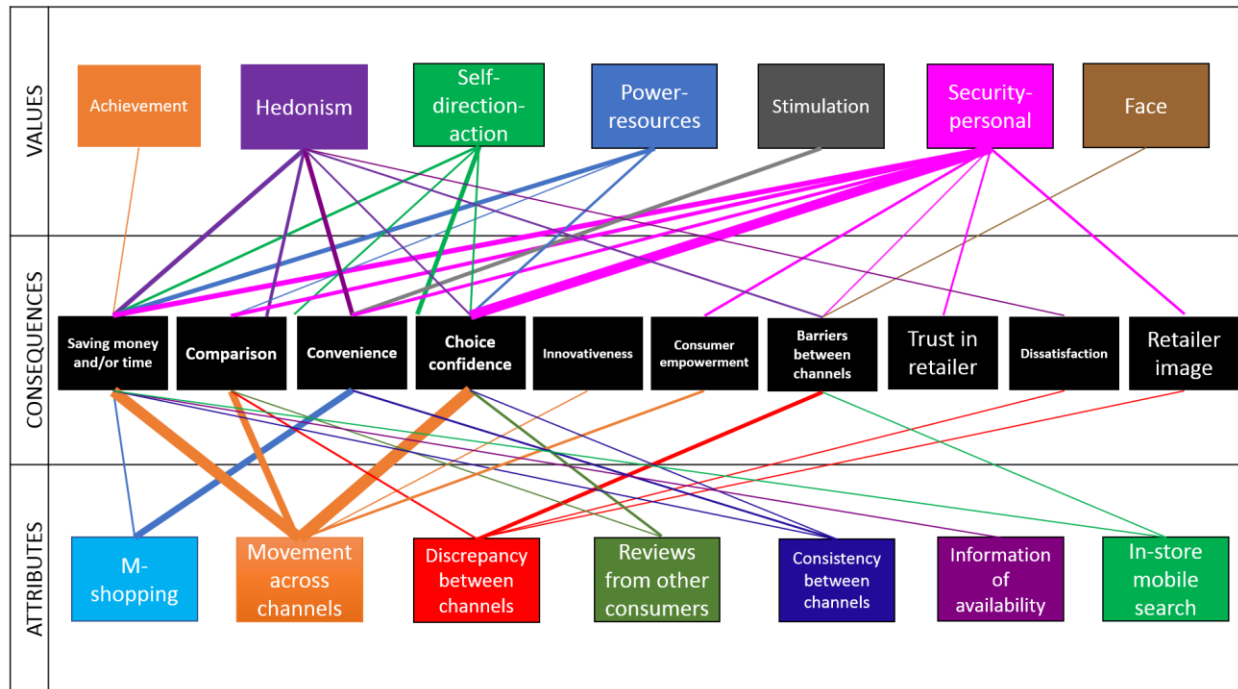
Source: developed by the author, 2020.

The HVM shows only the direct relations between the elements, respecting the cut-off point. Even if there are strong indirect ones, they do not appear on the map. For instance, the attribute Code 2 (Movement across channels) was 26 times related to value Code 24 (Security-personal), 13 times to value Code 22 (Power-resources), 10 times to value Code 20 (Hedonism) and 9 times to value 21 (Self-direction action). Other strong indirect relations were between attribute Code 3 (Discrepancy between channels) and value code 20 (Hedonism), which was repeated 8 times. They were all relations between attributes and values, and they were all intermediated by a consequence.

4.1.3 Discussions and implications of the qualitative phase

For the interviewees, the fact that a company provides a seamless experience (Consistency between channels) across all possible channels is very important and appreciated by them. As defended by Zhang et al. (2019), the interconnection of online and offline retail channels can bring customer satisfaction and loyalty. This way, the attribute "Movement across channels", which shows the consumer moving seamlessly across channels (VERHOEF et al., 2015), is strongly related to

"Saving money and/or time" (Harris et al, 2018), the possibility of "Comparison" to find the best offer (HALL; TOWERS, 2017) and "Choice confidence", that is the purchase assertiveness, the feeling of arriving at the best decision (FLAVIÁN et al., 2016).

The attribute "M-shopping", defined by Wang et al. (2015) as the use of mobile devices to shop, leads to the consequence "Convenience", that Hammerschmidt et al. (2016) related to the efficiency and lack of effort in purchasing, and then to two values, "Hedonism" and "Self-direction action", being the first one related to pleasure and the second to freedom (SCHWARTZ et al., 2012). Mobile use was linked to practicality (KANG, 2019) and functional, hedonic and social value, as well as congruency (IYER et al., 2018).

The performance that prevails among the respondents is showrooming (when the customer searches in the physical store and buys in the online store), but some also perform webrooming (searching online and buying in the physical store) (VERHOEF et al 2015). Social media, such as Facebook and Instagram, were mentioned as means to look for the product and offers, while YouTube was said to be used to "check how the product works". Other channels, such as catalogs are less often used, while Apps use seems to be growing.

When customers perceive "Discrepancy between channels", an attribute that is related to the poor channel flows (BARNEJEE, 2014), the consequences can be "Comparison", "Dissatisfaction", that is the feelings of unfulfillment (BOUGIE et al., 2003), or a change in the "Retailer image", that is the judgement of the retailer (BEZES, 2013). But the main consequence related to this attribute is the perception of "Barriers between channels" (HURÉ et al., 2017) that make them feel insecure and frustrated, which takes into account the values "Security-personal" and "Hedonism".

In general, they enjoy migrating from one channel to another and do it often and easily. Sometimes, they use these channels simultaneously, represented by the attribute "In-store mobile search" (GREWAL et al., 2018). All the interviewees mentioned they own the means and know how to migrate in a way that best suits them. All the respondents answered that they own gadgets and have the skills to transit through all the possible channels. However, they were unanimous to express that retailers in Brazil, even the ones that advertise they adopt omnichannel, make this migration difficult. For this reason, they experience dissatisfaction, and even stop using a channel or a retailer if they think the retailer "impose" them to use one providing special offers for a specific channel.

A specific channel seems to have an ambiguous relationship with customers. On the one hand, M-shopping was seen as a convenience and a way to save money or time. On the other hand,

more than half of the 29 respondents expressed that some retailers impose the app download, using strategies of discounts or free shipping valid only for this medium. Even app users perceive this negatively, since they do not want to be "anchored" to the App and some of them do not have "enough space" on the smartphone for another App, so they delete it as soon as possible.

Another "Discrepancy between channels" that was repeatedly commented by the participants was lack of information in the physical store. Some even said that they get "really frustrated" because they saw one thing on the internet, and in the physical store the salesperson did not know about the existence of the product. Others related insecurity due to the heterogeneity of the speeches.

From the persisting appearance of "Self-direction-action" as a value in our study, it is clear that consumers pursue freedom to choose and to migrate the way they want, and they expect a ubiquitous experience from the retailer.

Feeling safe, not being cheated by the retailer was related to "Security-personal". But our study is not the pioneer in linking risk aversion related to this multi- omnichannel scenario (LEE; JUNG, 2019; ORTLINGHAUS et al., 2019; KAZANCOGLU; AYDIN, 2018; HERHAUSEN et al., 2015). Consumers value the perception of safety when shopping, and our participants revealed that this becomes more evident when it is a high value purchase.

The fact that saving time and especially money is important to participants who appreciate monetary rewards in the movement across channels, makes "Power-resources" another value strongly related to omnichannel.

Not so strong, but also apparent, "Achievement" and "Face" were also values related to this strategy. For instance, "Face" is the value that Schwartz et al. (2012) explain that is the security to maintaining one´s public image and avoid humiliation. One participant exposed a situation that omnichannel helped her overcome this, once the access to information is greater and she can compare using all channels.

All the values found come from Schwartz et al. (2012). The main values that motivate the consumer towards an omnichannel behavior found in our research are: "Security-personal", "Hedonism", "Self-direction-action", "Power-resources" and "Stimulation". They are similar to the four Multi-Channel Shopping (MCS) values found by Hsiao, Yen and Li (2012) also in a means-end chain study. The MCS value "Enjoyment" is related to "Hedonism" and "Stimulation", while the MCS value "Safety" is correspondent to "Security-personal", and the MCS "Freedom" can be

compared to "Self-direction-action". However, they found that "Pragmatism" is the most important value in MCS, which is the motivation to maximize shopping outcomes economically and practically (HSIAO; YEN; LI, 2012), not very different from the value "Power-resources" found by us. But while it was the first in multi-channel environment, it was the third value for us.

The similarity between the studies was not so clear in the consequence elements. The most similar was that we found "Saving money and/or time" as a strong consequence, while they (HSIAO; YEN; LI, 2012) separated "Money Saving" and "Time Saving". So, although they might seem similar in the values found, multi-channel and omnichannel shoppers present distinctions in their chains, given that omnichannel retailing spotlights the full integration and interaction of all channels. These differences become even more evident when we analyze the attributes, that are the observable facets of the phenomena, and they are distinct from one study to another.

Mostly, it becomes clear that that omnichannel retailing brings freedom (Self-direction-action), satisfaction (Hedonism) and safety (Security-personal), reinforced by "Convenience", "Comparison", "Saving money and time", and, specially, "Choice confidence". Consumers do perceive the bright side of omnichannel, but, on the other hand, they were unanimous to say the retail sector in Brazil does not seem to be well prepared to this trend and does not offer the integration and interaction in the level expected by them, especially when reporting cases when the salesperson did not have as much information as the website, app or social network of the same retailer; or when the prices were very different and they felt compelled to use a specific channel.

4.2 PANEL OF EXPERTS

Five experts agreed to take part in the panel, being 2 national (Brazilian) and 3 international ones. After they replied, the items of the scale received a new order, with the ratings given by them. Their evaluation is shown in Appendix 6. Since the items were rated by experts, the total number corresponds to the sum of the scores given by the them, who checked the extent to which each item represents the construct: 1 (not at all); 2 (somewhat) and 3 (completely). This new order is decreasing from the maximal sum (15) to the minimal one (6).

The experts who agreed to evaluate the Omnichannel Perception Scale (OCP) have found that 5 items (previous OCP7, OCP9, OCP11, OCP26, OCP32) unanimously completely represent the

construct. That is, these items, now OCP 1, OCP 2, OCP 3, OCP4, OCP5 were rated 15 (5 experts X rating 3).

Seven items (previous OCP4, OCP5, OCP12, OCP24, OCP33, OCP34, OCP35) were rated 14 points, which means 4 experts found they completely represent the construct and one experts found they somewhat represent it. They are now OCP6, OCP7, OCP8, OCP9, OCP10, OCP11 and OCP12.

Also seven items (previous OCP 2, OCP 3, OCP 6, OCP8, OCP 27, OCP 36, OCP49) were rated 13 points. They are now OCP15, OCP16, OCP17, OCP18 and OCP19.

These 19 items, which can be seen in Table 8 are prematurely believed to measure omnichannel perception.

Table 8 - Items evaluated by the experts

Code	Items
OCP1	I can choose any physical store from this retailer to pick up my online purchases
OCP2	I notice this retailer knows me, keeping integrated purchase history of customers' online and offline purchases
OCP3	The in-store customer service center accepts return, repair or exchange of products purchased online
OCP4	I can return, repair or exchange goods I have bought online to any of this retailer´s physical stores
OCP5	I can check online if that product is in the store before I actually go there
OCP6	The Website or Mobile allows me to search for products available in the physical store
OCP7	The retailer allows me to check the inventory status at the physical store through the Website or Mobile
OCP8	The Website or Mobile provides post-purchase services such as support for products purchased at physical stores
OCP9	The retailer´s brand name, slogan and logo are consistent in all channels
OCP10	If I need, I know I can complain online about something that went wrong in the physical store
OCP11	If I need, I know I can have physical support of something I bought online
OCP12	If I need, I know I can have online support of something I bought in the physical store
OCP13	The Website or Mobile advertises the physical store by providing address and contact information of the physical store
OCP14	I feel a synchrony of information (such as address, contact, opening hours and availability of products) online and offline
OCP15	The physical store allows me to self-collect my online purchases

OCP16	I can receive at home any product bought in the physical store
OCP17	I feel customer service is almost the same online and offline
OCP18	I feel free to use whatever channel I feel like from this particular retailer
OCP19	I like to know that I have access to everything, everywhere, any time in this retailer

Source: Developed by the author, 2020.

Besides rating the items, all the experts all contributed with suggestions of changes in expressions and conditions used. These considerations were taken into account to form the first questionnaire.

4.3 QUANTITATIVE PHASE – THREE ROUNDS OF SURVEY

Three rounds of survey were collected in order to achieve a better combination of factors and items to measure omnichannel perception. Since it is a new phenomenon, only the cases of respondents with acquaintance of a shopping journey including more than one channel were considered. Both interaction with the retailer in the various touch points and integration of the retailer among the channels were surveyed.

It is also important to emphasize that, the surveys were undergone in Portuguese, with Brazilian respondents. So, it was translated and adapted to the language. Also, they were adapted according to the experts´ suggestions.

4.3.1 First round - Exploratory Factor Analysis

The first round of survey, with a questionnaire developed from (1) the literature, (2) results of interviews and Ladders, and (3) panel of experts had 54 items of the provisional scale, besides demographic questions. During September 2019, data was collected, and 273 questionnaires were responded (achieving the minimum of 5 cases per question in order to run EFA).

The sample consists of customers, mainly of undergraduate and postgraduate students, who have used more than one channel in the same shopping experience was a precondition to participate

in the study. A total of 172 women and 101 men participated in the study. An amount 26 participants were 20 years old or younger; while 218 were from 21 to 40 years old; 26 from 41 to 60 years old; and 2 participants were more than 60 years old. Before asking the closed questions, they were asked to write the name of the brand or retailer they interact with using more than one channel in the same shopping experience. This way, only the participants who wrote the name of the retailers that match the criteria were considered.

The questionnaire of the first round can be seen in Appendix 7, and, as one can see, the items were reordered and relabeled. In this first round, the items did not belong to any construct yet. After the data was collected, the Exploratory Factor Analysis of the results of this first questionnaire was run in early October using SPSS.

The items removed, in order, can be seen in Table 9.

Table 9 - Items removed during the first EFA in order

Code	Item
OCP34	If I need, I know I can have in-store assistance for something I bought online.
OCP15	I do not feel barriers / inconsistencies between this retailer's channels
OCP27	I feel that this retailer's customer service is the same online and offline.
OCP16	I feel this retailer tries to make it easier to use different branded touchpoints (channels) during the shopping experience.
OCP1	The company's website/App highlights the promotions that are taking place in the physical store.
OCP14	I feel a true interaction buying on channels anywhere and anytime from this retailer
OCP42	I feel the product information is the same online and offline
OCP21	I can use coupons in store that I received online from this retailer
OCP39	I feel this retailer is trying to facilitate this channel integration
OCP43	I feel that, in the physical store, sellers know the product as much as I have information online
OCP4	The website/App allows me to search for products available in the physical store.
OCP32	I can check online if this product is in the physical store before actually going there
OCP28	Retailer practices the same prices Online and Offline
OCP5	The company allows me to check inventory in the physical store through the website/App.
OCP40	I realize that the products in the catalog are the same as all channels in this retailer.
OCP45	I feel that in the App the retailer has the same information as in the website
OCP9	I perceive this retailer knows me, keeping my online and offline shopping history integrated.
OCP23	The physical store highlights the site / App through flyers, receipts and bags
OCP22	The website / App highlights promotions that appear in newspapers, receipts or pamphlets
OCP49	I like to know that I have access to anything, anywhere and anytime at this retailer
OCP8	I can receive at home any product purchased at the physical store
OCP10	This retailer allows me to access the purchase history integrated in any channel.
OCP52	With all these channels from this retailer, I get more sustainable
OCP29	Moving through this retailer's channels gives me freedom

OCP12	The company's website / App provides after-purchase services, such as assistance with store-bought products.
OCP2	The company's website/App advertises the physical store, providing physical store address and contact information.
OCP48	I feel that in different social networks the retailer shows the same availability of products and information
OCP3	I feel consistency/synchrony of the company information (such as address, contact, opening hours and product availability) online and offline.
OCP13	Physical store provides after-shopping services for products purchased online.
OCP30	Moving through this retailer's channels brings me satisfaction
OCP36	I feel free to use whatever channel I want from this retailer
OCP25	I can return, repair or exchange goods regardless of the channel that purchased it.
OCP41	I am willing to use more channels from this retailer
OCP51	With all these channels from this retailer, I save money

Source: developed by the author, 2020.

The first EFA round, removed eight items that did not achieve a maximum factor loading of 0.5. So, OCP34 (0.451), OCP15 (0.450), OCP27 (0.438), OCP16 (0.476), OCP1 (0.420), OCP14 (0.396), OCP42 (0.467), and OCP21 (0.493) were removed, in a total of 65.44% of total variance explained.

A second EFA round was run, and then OCP39 (0.477), OCP43 (0.452), OCP4 (0.462) and OCP32 (0.39) were excluded for not having factor loading over 0.5. Four items were excluded and the total variance explained remained 65.11%.

In the third EFA round, OCP28 (0.488) was excluded for having a weak factor loading and then a 66.48% total variance explained was achieved.

For the next EFA round, the optimum number of factors that would result in a better variance explained number was tested. Then, in the fourth EFA round, based on the understandig of the struture of the factors, the number of factors was set as six, and then OCP5 (0.344), OCP40 (0.484), OCP45 (0.453), OCP9 (0.429), OCP23 (0.44) and OCP22 (0.426) were removed, and 56.59% of variance explained was achieved.

In the fifth EFA round only OCP49 (0.485) and OCP8 (0.49) were removed, which resulted in 58.10% of variance explained.

In the sixth EFA round, only OCP10 (0.483) was excluded and 58.68% of variance explained was reached.

In the seventh EFA round, all the variables loaded more than 0.5, but, since the goal was to shorten the number of items in the scale and improve its explanation and pardimony, the lowest ones

were removed, which were OCP52, OCP29, OCP12 and OCP2, OCP48. It resulted in 61.03% of variance explained.

And, finally, the eighth and last EFA round, OCP3, OCP13, OCP30, OCP36, OCP25, OCP41 and OCP51 were removed, resulting in a total variance explained of 66.91%. This is shown in Table 10.

Table 10 - Total Variance Explained by Principal Component Analysis

Component	Rotation Sums of Squared Loadings		
	Total	% of variance	Cumulative %
1	4.108	19.563	19.563
2	3.126	14.884	34.447
3	2.112	10.059	44.506
4	1.667	7.938	52.444
5	1.635	7.787	60.231
6	1.404	6.685	66.915

Source: SPSS output, 2019.

Two tests were performed in order to check the suitability of the data. This way, the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of Sphericity were run in the first round. Both KMO and Barlett´s achieved acceptable results, being KMO (>0,8) and Barlett´s (p.<0.001). The results for each factor can be seen in Table 11.

Table 11 - KMO and Barlett´s of the first round

KMO	.861
Barlett´s Approx. Chi-Square	2272.971
Df	210
Sig.	.000

Source: SPSS output, 2019.

The first factor analysis resulted in 21 items belonging to 6 factors. All the items had loads greather than 0.5 (> 0.500) in their respective constructs. The extraction method used was Principal

Component Analysis (PCA), and the Rotation Method was Varimax with Kaizer Normalization. The Rotated Component Matrix, result of the first EFA, can be seen in Figure 7.

Figure 7- Rotated Component Matrix

	Component					
	1	2	3	4	5	6
OCP53	,805	,178	-,108	,068	,081	-,005
OCP46	,777	,240	-,049	-,091	,081	-,101
OCP47	,744	,060	,067	-,054	,224	,063
OCP50	,724	,048	,125	,130	,145	,081
OCP24	,702	-,016	,152	,113	-,019	,038
OCP54	,615	,123	,289	,144	,062	,189
OCP17	,571	,151	,261	,149	,000	,226
OCP31	,570	,483	,049	,070	,045	,083
OCP26	,155	,847	,123	,179	,036	,088
OCP33	,202	,831	,153	,104	,043	,155
OCP11	,090	,764	,048	,138	,172	,075
OCP35	,126	,673	,303	,116	,150	,011
OCP38	,073	,142	,824	-,042	-,073	-,054
OCP37	,158	,062	,689	,020	,087	,239
OCP44	,109	,235	,667	-,049	,210	-,029
OCP7	,070	,181	-,039	,844	,156	,100
OCP6	,176	,246	-,011	,835	-,004	-,004
OCP18	,190	,161	,080	-,004	,849	,019
OCP19	,156	,143	,108	,190	,811	,218
OCP20	,161	,100	-,032	-,016	,149	,889
OCP21	,053	,292	,388	,221	,079	,585

Source: SPSS output, 2019.

This first factor analysis allowed the formation of 6 factors. The first one was composed by OCP53, OCP46, OCP47, OCP50, OCP24, OCP54, OCP17 and OCP31. The second one was composed by OCP26, OCP33, OCP11 and OCP35. The third factor consisted of OCP38, OCP37 and OCP44. The fourth one was composed by OCP7 and OCP6; while the fifth one by OCP18 and OCP19. The last factor consisted of OCP20 and OCP21.

Based on their contents, the 6 factors were previously named (1) Benefits; (2) post purchase services; (3) channel synchrony; (4) omnichannel scenarios; (5) interaction; and (6) promotions. Once some of the factors did not have enough items, factors 2, 3, 4, 5 and 6 were complemented with the theory to make them more robust, being prioritized questions with good scores given by the experts, and all the model was reevaluated and relabeled to perform the second round of surveys. Factor 2 received 3 new items, factor 3 received 4 new ones, factor 4 received 4 new ones, factor 5 received

5 new ones and finally factor 6 received 4 new ones. All of these new items were added for being not only relevant to what I attempted to measure, but also suitable to their corresponding factors.

While factors 2, 3, 4, 5 and 6 did not have enough items, factor 1 exceeded the expected number of items. So, also, in this attempt to uniform the number of variables per factor, since factor 1 had the largest number of variables, all the items were analyzed in order to check if they were all necessary, and OCP54 (with all these channels from this retailer, I get better products), was excluded due to its content, and its low rate (9) in the panel of experts, since "get better offers" and "assertivity", items present in the first factor as well, are more related to channels itself.

4.3.2 Second round – Exploratory Factor Analysis

The second quantitative round was performed in the last two weeks of October 2019. There were 40 questions left from the first questionnaire. This second questionnaire, which was applied online, can be seen in Appendix 8. A total of 125 questionnaires with randomized questions and 134 questionnaires with ordered ones were collected. Then, to run the second exploratory factor analysis with enough cases per item, both data bases were merged into one, resulting in 254 valid cases.

Again, the sample consists mainly of undergraduate students who have used more than one channel in the same shopping experience. And, as in the first questionnaire, before asking the closed questions, participants were asked to write the name of a brand or retailer they interact with using more than one channel in the same shopping experience. This way, only the participants who wrote the name of the retailers that match the criteria were considered. From the 254 participants, 155 were women and 99 were men. An amount 78 participants were 20 years old or younger; while 154 were from 21 to 40 years old; 24 from 41 to 60 years old; and only 2 participants were more than 60 years old.

It is also important to check that the items were relabeled for this second questionnaire, according to the first factor analysis. In Table 12 each item is shown with its relabeling and corresponding construct/factor.

Table 12 - Relabeling of the second round

Label in 1st round	Label in 2nd round	Item	Construct / Factor
OCP53	OCPR1	With all these channels from this retailer, I get better offers	Benefits
OCP46	OCPR2	I know I can check this retailer's other consumer reviews on social networks	
OCP47	OCPR3	I know I can check out new trends and products from this retailer on social networks	
OCP50	OCPR4	With all these channels from this retailer, I save time	
OCP24	OCPR5	Retailer brand name, tagline, and logo are consistent across channels	
OCP17	OCPR6	I feel that using different channels or technologies during the shopping journey will benefit me at this retailer.	
OCP31	OCPR7	I feel I have more assertiveness in my purchase with this retailer because I can move through channels	
OCP26	OCPR8	I can return, repair or exchange merchandise that I purchased online at any of this retailer's physical stores.	Post-purchase services
OCP33	OCPR9	If I need, I know I can complain online about something that happened in the physical store	
OCP11	OCPR10	The physical store customer service center accepts the return or exchange of products purchased online.	
OCP35	OCPR11	If I need, I know I can get online assistance for something I bought at the physical store	
New item	OCPR12	Physical store provides after-purchase services for products purchased online.*	
New item	OCPR13	The company's website / App provides after-purchase services, such as assistance with physical store purchases*	
New item	OCPR14	If I need, I know I can have in-store assistance for something I bought online*	
OCP38	OCPR15	This retailer never has special offers for just one specific channel.	Channel synchrony
OCP37	OCPR16	This retailer never induce me to use a specific channel offering unique advantages for that channel.	
OCP44	OCPR17	I feel that in the physical store, the retailer has the same products as online	
New item	OCPR18	I perceive this retailer knows me, keeping my online and offline shopping history integrated*	
New item	OCPR19	I can check online if this product is in the physical store before actually going there*	
New item	OCPR20	The website/App allows me to search for products available in the physical store*	
New item	OCPR21	The company allows me to check inventory in the physical store through the website/App*	
OCP7	OCPR22	I can choose any physical store from this retailer to pick up my purchases made online.	Omnichannel scenarios
OCP6	OCPR23	The physical store allows me to collect my online purchases myself.	

New item	OCPR24	I can buy in the physical store and ask them to deliver at home**	
New item	OCPR25	I can buy in the social network and pick up at store**	
New item	OCPR26	I can buy in the social network and ask them to deliver at home **	
New item	OCPR27	The company sends e-mails of products searched in the social network**	
OCP18	OCPR28	I can interact with this retailer on any channel at any time	
OCP19	OCPR29	I can interact with this retailer using the channel I want anytime	
New item	OCPR30	I can interact (ask questions, make suggestions or complaints) with the retailer using the App**	
New item	OCPR31	I can interact (ask questions, make suggestions or complaints) with the retailer using social network**	
New item	OCPR32	I can interact (ask questions, make suggestions or complaints) with the retailer using the website**	**Interaction**
New item	OCPR33	I can interact (ask questions, make suggestions or complaints) with the retailer in the physical store **	
New item	OCPR34	I can interact (ask questions, make suggestions or complaints) with the retailer in the call center**	
OCP20	OCPR35	On the website / App I can use my loyalty card or redeem coupons obtained offline from this retailer.	
OCP21	OCPR36	I can use coupons in store that I received online from this retailer	
New item	OCPR37	On the website / App I can use my loyalty card from this retailer**	
New item	OCPR38	On the website / App I can use coupons obtained offline from this retailer**	**Promotions**
New item	OCPR39	In the physical store I can use coupons received by the website / App of this retailer**	
New item	OCPR40	In the physical store I can take gifts or samples of offers I saw online**	

Source: developed by the author, 2019.

*Items that were complemented from the first to the second round for being well evaluated by the experts.

** Items that were complemented from the first to the second round according to the literature.

The exploratory factor analysis of the results of the second questionnaire resulted that one of the six factors of the first factor analysis became very weak and was removed from the analysis. After different attempts of numbers of factors, the best combination was 5 factors.

The steps to form the best possible combination of factors started by running the factor analysis. Then, it resulted in 9 factors with 62.42% of variance explained. Since the attempt was to achieve a fewer number of factors and items, I indicated the same number of factors of the last analysis, that is, six. It resulted in 51.19% of variance explained. It was a first signal that possibly six was not the ideal number of factors.

In order, the items excluded in the second round of EFA are as follows in Table 13.

Table 13 - Items removed during the second EFA in order

Code	Item
OCPR9	If I need, I know I can complain online about something that happened in the physical store
OCPR34	I can interact (ask questions, make suggestions or complaints) with the retailer in the call center
OCPR26	I can buy in the social network and ask them to deliver at home
OCPR19	I can check online if this product is in the physical store before actually going there
OCPR37	On the website / App I can use my loyalty card from this retailer
OCPR5	Retailer brand name, tagline, and logo are consistent across channels
OCPR20	The website/App allows me to search for products available in the physical store
OCPR27	The company sends e-mails of products searched in the social network
OCPR40	In the physical store I can take gifts or samples of offers I saw online
OCPR2	I know I can check this retailer's other consumer reviews on social networks
OCPR3	I know I can check out new trends and products from this retailer on social networks
OCPR11	If I need, I know I can get online assistance for something I bought at the physical store
OCPR13	The company's website / App provides after-purchase services, such as assistance with physical store purchases.
OCPR31	I can interact (ask questions, make suggestions or complaints) with the retailer using social network
OCPR15	This retailer never has special offers for just one specific channel.
OCPR17	I feel that in the physical store, the retailer has the same products as online
OCPR16	This retailer never induce me to use a specific channel offering unique advantages for that channel.

Source: developed by the author, 2020.

So, persisting in the factor analysis, in the first EFA round OCPR9 (0.462), OCPR34 (0.467), OCPR26 (0.413) and OCPR19 (0.499) were removed because their factor loading were lower than 0.5, achieving 54.85% of variance explained. With the same criteria, the second EFA round removed OCPR37 (0.478), OCPR5 (0.483) and OCPR20 (0.443) and 57.11% was the variance explained.

Increasing rigor and accuracy, I decided to remove the items whose factor loading were below 0.6. Then, in the third EFA round, OCPR27 (0.528), OCPR40 (0.599), OCPR2 (0.582) and OCPR3 (0.502) were excluded, resulting in 60.33% of variance explained.

In order to keep parsimony and consistency in the number of variables, removing items with low load, OCPR11, OCPR13 and OCPR31 were removed in the fourth EFA round, achieving as total variance explained 62.41%.

Then, realizing that one of the factors was not very strong, along with the fact that in this exploratory phase I was not certain of the ideal number of factors, I started trying different combinations, and shortening to five factors, the total variance explained was 57.03%, with variables clearly weak. The fifth EFA round removed OCPR15 and OCPR17, 62.57% was the total variance explained, that is, nearly the same with 6 factors, but removing one factor and two variables.

Removing OCPR16 resulted in 64.94% of variance explained in the sixth EFA round, and also achieved a parsimony among factors, being that the first, second, third and fourth ones ended with 4 variables each, and only the fifth factor ended with 3 variables. These five factors were strong, since I have taken particular care that all items had a load greater than 0.6 in VARIMAX. This total variance explained of 64.94%, according to Hair et al (2012), is acceptable. The total variance explained can be seen in Table 14.

Table 14 -Total variance explained by Principal Component Analysis of the second EFA

Component	Estraction Sums of Squared Loadings		
	Total	% of variance	Cumulative %
1	5.176	27.242	27.242
2	2.445	12.869	40.111
3	1.827	9.616	49.727
4	1.612	8.485	58.212
5	1.278	6.729	64.941

Source: SPSS output, 2019.

Kaiser-Meyer-Olkin (KMO) and Bartlett's test of Sphericity were also run in the second round. Both KMO and Barlett´s achieved acceptable results, being KMO (>0,8) and Barlett´s (p.<0,001). The results for each factor can be seen in Table 15.

Table 15 - KMO and Barlett´s of the second round

KMO	.816
Barlett´s Approx. Chi-Square	1853.402
Df	171
Sig.	.000

Source: SPSS output, 2019.

The second EFA resulted in the five factors, whose factor loadings can be seen in Figure 7. All the items were loaded higher than 0.5 (> 0.500) in their respective constructs. The extraction method used was Principal Component Analysis (PCA), and the Rotation Method was Varimax with Kaizer Normalization. The Rotated Component Matrix is shown in Figure 8.

Figure 8- Rotated Component Matrix

	Component				
	1	2	3	4	5
OCPR10	,829	,139	,125	,061	-,016
OCPR14	,790	,176	,201	,098	-,016
OCPR8	,782	,170	,187	,071	-,023
OCPR12	,718	,116	,115	,047	,277
OCPR36	,116	,835	,214	-,046	,003
OCPR39	,111	,831	,199	,069	,019
OCPR38	,226	,720	,067	-,074	,127
OCPR35	,142	,677	,060	,038	,231
OCPR23	,134	,090	,873	,059	,145
OCPR22	,207	,132	,789	,038	,048
OCPR25	,260	,083	,669	,016	,189
OCPR24	,047	,203	,661	,030	,070
OCPR7	,159	-,004	-,057	,765	,182
OCPR4	,118	-,082	,132	,759	,016
OCPR6	-,032	,143	-,055	,725	,034
OCPR1	,020	-,075	,104	,672	,167
OCPR28	,078	,039	,108	,038	,862
OCPR29	,141	,155	,141	,166	,833
OCPR32	-,091	,177	,174	,281	,644

Source: SPSS output, 2019

Approaching a definition of the development of the scale, the reliability of each of these five factors and the 19 variables was tested.

The first factor, renamed Post–purchase services in omnichannel, consisting of OCPR10, OCPR14, OCPR8 and OCPR12 resulted in an acceptable Cronbach´s Alpha (0.835). The second factor, now renamed Omnichannel promotions, was composed by OCPR36, OCPR39, OCPR38 and OCPR35, with Chrombach´s Alpha was 0.817, which is acceptable. Omnichannel strategies, the new name of Factor 3, got an acceptable 0.793 Chronbach´s reliability, consisted of OCPR22, OCPR23, OCPR24 and OCPR25. The fourth factor, renamed Omnichannel advantages, received 0.729 of reliability, which is at best acceptable, for the Chronbachs´s Alpha. The last factor, renamed Interaction with the retailer, was evaluated as 0.781 in Chronbach´s Alpha.

Reliability must be consistent to what the scale intends to measure. This reliability test results can be observed in Table 16.

Table 16 - Cronbach´s Alpha

Factors	Number of items	Chronbach´s Alpha
Post–purchase services in omnichannel	4	0.835
Omnichannel Promotions	4	0.817
Omnichannel strategies	4	0.793
Omnichannel advantages	4	0.729
Interaction with the retailer	3	0.781

Source: SPSS output, 2019

The means, standard deviation and frequency of each item of the five factors can be seen in Table 17.

Table 17 - Item Statistics

	Variables	Mean	Standard Deviation	N
Post–purchase services in omnichannel	OCPR10	4.48	1.925	254
	OCPR14	4.45	1.904	254
	OCPR8	4.28	2.009	254
	OCPR12	4.52	1.847	254
Omnichannel Promotions	OCPR36	4.17	1.964	254
	OCPR39	4.25	1.847	254
	OCPR38	4.23	1.864	254
	OCPR35	4.76	1.789	254
Omnichannel strategies	OCPR22	4.70	1.993	254
	OCPR23	5.19	1.979	254
	OCPR24	4.61	2.234	254
	OCPR25	4.90	2.184	254
Omnichannel advantages	OCPR1	5.88	1.341	254
	OCPR6	5.93	1.201	254
	OCPR4	6.28	1.109	254

	OCPR7	5.87	1.282	254
Interaction with the retailer	OCPR28	5.05	1.752	254
	OCPR29	5.14	1.738	254
	OCPR32	5.67	1.434	254

Source: SPSS output, 2019

With this second round of factor analysis, it was possible to shorten the proposed scale to 19 variables. Besides the shortening of number of items, one of the factors was also excluded. It is important to note that, as the variables were excluded, the variance explained got higher, that is, a parsimony of the data, when less items explain the constructs better than more items.

4.3.3 Third round – Confirmatory Factor Analysis

From the second to the third round, 19 items remained. The third questionnaire can be seen in Appendix 9. This time, the results were necessary to run Confirmatory Factor Analysis, using Lisrel Software Systems, version 8. And, as recommended, in order to run the CFA, 10 cases per item are necessary. Accordingly, 190 cases were collected in November 2019.

Once again, the sample consists mainly of undergraduate students who have used more than one channel in the same shopping experience. But, different from the first and second questionnaires, participants were asked questions about one particular Brazilian retailer, they only had to check what channels they use from it. From the 190 participants, 116 were women and 74 were men. An amount 20 participants were 20 years old or younger; while 139 were from 21 to 40 years old; 23 from 41 to 60 years old; and 6 participants were more than 60 years old.

The uniqueness of this round was that the respondents were asked about a particular retailer, which was the most cited not only in the qualitative interviews, but also in the first and second rounds of surveys. This retailer offers its products and interacts with its customers in a variety of channels (such as physical store, e-commerce, App, Call Center and Social Networks), and it has created a lab to develop innovations in channels. It has more than 700 physical stores, and the diversified mix of products sold by the company include electronics, books and furniture.

Not only the items, but also the constructs were relabeled. The first Construct / Factor was renamed to Post-purchase services in omnichannel (PPSE); the second one is Omnichannel Promotions (PROM); the third one refers to Buy-online, pick-up-in-store (BOPS); the fourth factor is Omnichannel Advantages (ADVA); and the last one is Interaction with the retailer (INTE). The new label of items along with their constructs can be seen in Table 18.

Table 18 - Relabeling of the third round

Label in 2nd round	Label in 3rd round	Item	Construct / Factor
OCPR8	O1	I can return, repair or exchange merchandise that I purchased online at any of this retailer's physical stores.	**Post–purchase services in omnichannel**
OCPR10	O2	The physical store customer service center accepts the return or exchange of products purchased online.	
OCPR12	O3	Physical store provides after-purchase services for products purchased online *	
OCPR14	O4	If I need, I know I can have in-store assistance for something I bought online*	
OCPR36	O5	I can use coupons in store that I received online from this retailer	**Omnichannel promotions**
OCPR39	O6	In the physical store I can use coupons received by the website / App of this retailer**	
OCPR38	O7	On the website / App I can use coupons obtained offline from this retailer **	
OCPR35	O8	On the website / App I can use my loyalty card or redeem coupons obtained offline from this retailer.	
OCPR22	O9	I can choose any physical store from this retailer to pick up my purchases made online.	**Buy-online, pick-up-in-store**
OCPR23	O10	The physical store allows me to collect my online purchases myself.	
OCPR24	O11	I can buy in the physical store and ask them to deliver at home **	
OCPR25	O12	I can buy in the social network and pick up at store**	
OCPR1	O13	With all these channels from this retailer, I get better offers	**Omnichannel advantages**
OCPR4	O14	With all these channels from this retailer, I save time	
OCPR6	O15	I feel that using different channels or technologies during the shopping journey will benefit me at this retailer.	
OCPR7	O16	I feel I have more assertiveness in my purchase with this retailer because I can move through channels	
OCPR28	O17	I can interact with this retailer on any channel at any time.	**Interaction with the retailer**
OCPR29	O18	I can interact with this retailer using the channel I want anytime	
OCPR32	O19	I can interact (ask questions, make suggestions or complaints) with the retailer using the website**	

Source: developed by the author, 2019.

*Items that were complemented from the first to the second round for being well evaluated by the experts.
** Items that were complemented from the first to the second round according to the literature.

Statistics Tables show the Goodness of Fit Statistics, along with the value expected for each index. These statistics are, in order: X² (Chi-Square), df (Degrees of Freedom), NNFI (Non-Normed Fit Index), NFI (Normed Fit Index), GFI (Goodness of Fit Index), CFI (Comparative Fit Index) and RMSEA (Root Mean Square Error of Aproximation).

Running the first CFA, it was perceived that O11 had a weak load (0.28 > 0.7). Removing it was necessary to keep the model. The Goodness of Fit Indices, removing O11, along with the recommended values of Hair et al. (1998) and Kline (1998) are presented in Table 19.

Table 19 - Goodness of Fit Indices (removing O11)

Model	X²	df	X²/df	NNFI	NFI	GFI	CFI	RMSEA
Omnichannel Perception	438.84	125	3.5	0.85	0.84	0.82	0.88	0.10
Recommended values	---	---	< 3	> 0.9	> 0.9	> 0.9	> 0.9	0.04 ~ 0.08

Source: developed by the author, based on LISREL output; recommended values of Hair et al. (1998) and Kline (1998).

The conceptual model excluding O11, became as follows in Figure 9.

Figure 9- First Conceptual Model (Removing O11)
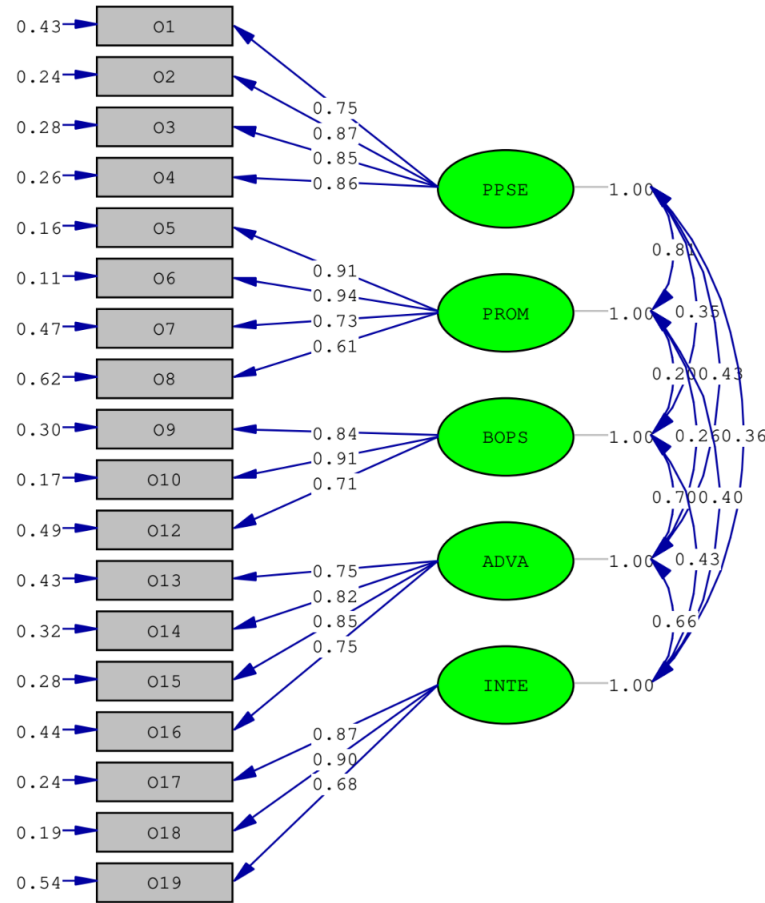
Source: LISREL output, 2019.

Not achieving a good result either (0.61 > 0.7), I simulated the exclusion of O8, and then a new set of statistics concerning the Goodness of Fit is present in Table 20.

Table 20 - Goodness of Fit Indices (removing O8)

Model	X²	df	X²/df	NNFI	NFI	GFI	CFI	RMSEA
Omnichannel Perception	334.96	125	2.68	0.86	0.85	0.84	0.89	0.094
Recommended values	---	---	< 3	> 0.9	> 0.9	> 0.9	> 0.9	0.04 ~ 0.08

Source: developed by the author; recommended values of Hair et al. (1998) and Kline (1998).

After removing O8, the conceptual model became as shown in Figure 10.

Figure 10 - Second Conceptual model (removing O8).
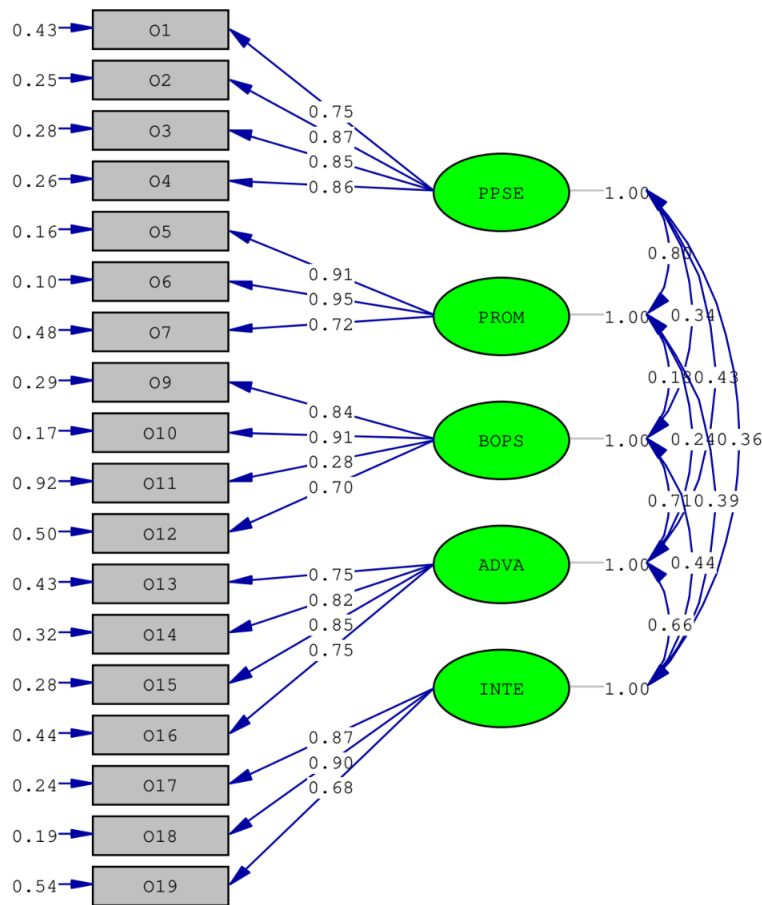
Source: LISREL Output, 2019.

In the attempt to improve the Goodness of Fit Indexes in general, both items O8 (0.61) and O11 (0.28) were excluded from the model. This, in fact, made the indeces either achieve the recommended values or getting close to it. One can see the values of the final model in Table 21.

Table 21 - Final Goodness of Fit Indeces (removing O8 and O11)

Model	X²	df	X²/df	NNFI	NFI	GFI	CFI	RMSEA
Omnichannel Perception	349.42	109	3.20	0.87	0.86	0.84	0.9	0.096
Recommended values	---	---	< 3	> 0.9	> 0.9	> 0.9	> 0.9	0.04 ~ 0.08

Source: developed by the author, based on LISREL outputs, recommended values of Hair et al. (1998) and Kline (1998).

Finally, the ultimate conceptual model, which resulted after the delition of both O8 and O11, the items with low values, is shown in Figure 11.

Figure 11- Final Conceptual Model
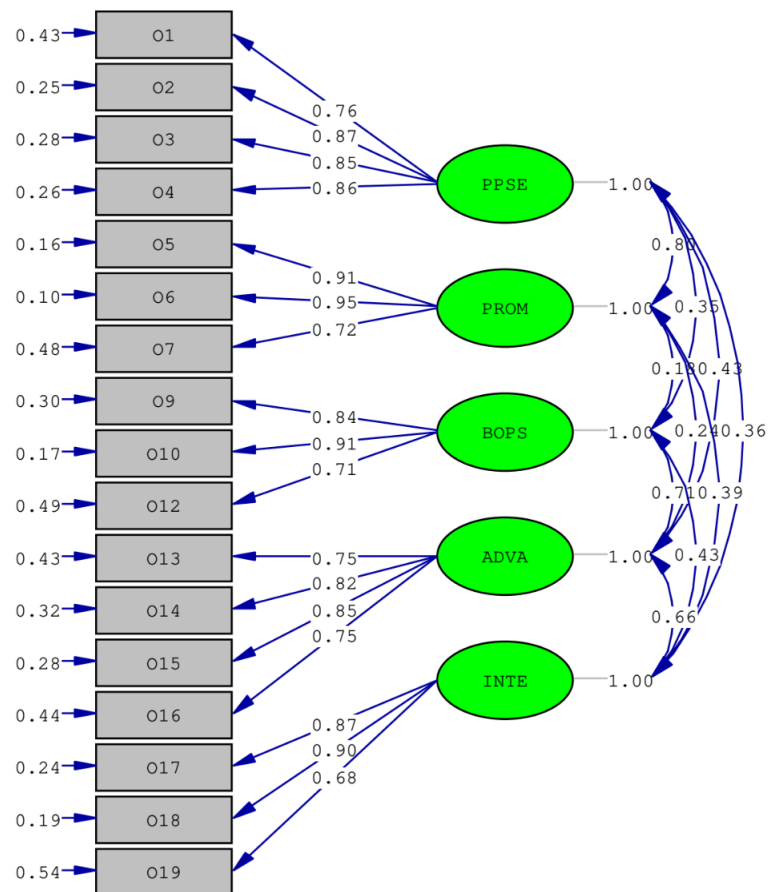
Source: LISREL output, 2019.

The first construct, post-purchase services in omnichannel meets the ideas of Brynjolfsson, Hu and Rahman (2013), who reinforce that the retail sector needs to shift from a transaction and delivery based model to a "concierge" model, oriented to assist the consumer.

4.3.3.1 Reliability

The values of reliability were calculated after Equation 1, which is the square root of the sum of Lambda divided by the square root of the sum of Lambda plus the sum of the Standard Error. The results of the reliability values are presented in Table 22.

Table 22 - Composite reliability (CR)

Item	Construct	Lambda (λ)	Sum of Lambda	Standard Error (SE)	Sum of SE	Theta delta (δ)	Construct Reliability (CR)	Decision
O1	Factor 1 (PPSE)	0.76	3.34	0.06	0.24	0.43	0.979	Evidence of reliability
O2		0.87		0.06		0.25		
O3		0.85		0.06		0.28		
O4		0.86		0.06		0.26		
O5	Factor 2 (PROM)	0.91	2.58	0.06	0.18	0.16	0.974	Evidence of reliability
O6		0.95		0.06		0.10		
O7		0.72		0.06		0.48		
O9	Factor 3 (BOPS)	0.84	2.46	0.06	0.19	0.30	0.970	Evidence of reliability
O10		0.91		0.06		0.17		
O12		0.71		0.07		0.49		
O13	Factor 4 (ADVA)	0.75	3.17	0.06	0.24	0.43	0.977	Evidence of reliability
O14		0.82		0.06		0.32		
O15		0.85		0.06		0.28		
O16		0.75		0.06		0.44		
O17	Factor 5 (INTE)	0.87	2.45	0.06	0.19	0.24	0.969	Evidence of reliability
O18		0.90		0.06		0.19		
O19		0.68		0.07		0.54		

Source: LISREL output, 2019.

According to the numbers of the table, the reliability values of all the five constructs are above 0.70, which brings evidence in favor of the reliability of the constructs.

4.3.3.2 Average Variance Extracted and Discriminant Validity

Measuring the amount of variance in a construct in relation to the amount of variance due to measurement error, one can see the AVE results in Table 23.

Table 23 - Average Variance Extracted (AVE)

Item	Construct	Lambda (λ)	SE (Standard Error)	Sum of SE	Theta delta (δ)	Average Variance Extracted (AVE)	Decision
O1	Factor 1 (PPSE)	0.76	0.06	0.24	0.43	0.921	Acceptable
O2		0.87	0.06		0.25		
O3		0.85	0.06		0.28		
O4		0.86	0.06		0.26		
O5	Factor 2	0.91	0.06	0.18	0.16	0.926	Acceptable

O6	(PROM)	0.95	0.06		0.10		
O7		0.72	0.06		0.48		
O9	Factor 3 (BOPS)	0.84	0.06		0.30		
O10		0.91	0.06	0.19	0.17	0.915	Acceptable
O12		0.71	0.07		0.49		
O13	Factor 4 (ADVA)	0.75	0.06		0.43		
O14		0.82	0.06	0.24	0.32	0.913	Acceptable
O15		0.85	0.06		0.28		
O16		0.75	0.06		0.44		
O17	Factor 5 (INTE)	0.87	0.06		0.24		
O18		0.90	0.06	0.19	0.19	0.914	Acceptable
O19		0.68	0.07		0.54		

Source: LISREL output, 2019.

The results of AVE were acceptable (>0.7). The discriminant validity, which compares AVE with the correlations among constructs, is brought in Table 24.

Table 24 - Discriminant validity

Construct	PPSE	PROM	BOPS	ADVA	INTE	Decision
PPSE	0.921	----	---	---	---	
PROM	0.971	0.926	---	---	---	Evidence of
BOPS	0.636	0.288	0.915	---	---	discriminant
ADVA	0.725	0.419	0.910	0.913	---	validity
INTE	0.649	0.685	0.725	0.897	0.914	

Source: LISREL outputs, 2019.
Diagonal values are the square root of the Average Variance Extracted (AVE).
Off-diagonal values are the correlations among constructs

For Hair Jr. et al (2009), discriminant validity exists if AVE is higher than correlations. According to Hair et al (2009), if the correlations of two latent variables are above 0.9, they have significant overlapping construct, that is, there is multicollinearity among them. Results of variance extracted were below expected, bringing a partial evidence of discriminant validity. Except for the correlation of PROM and PPSE, which was higher than the AVE, the other correlations were acceptable. However, it is important to highlight that the correlation between ADVA and BOPS is on the limit level of acceptability. This way, there is a suggestion that there must be another configuration for the constructs, which was also tested in item 4.3.5.1.

4.3.4 Final scale

After all the steps performed in this research, which can be seen in Figure 12, a total of 17 questions remained as the final scale for Omnichannel Perception.

Figure 12- Steps of the research
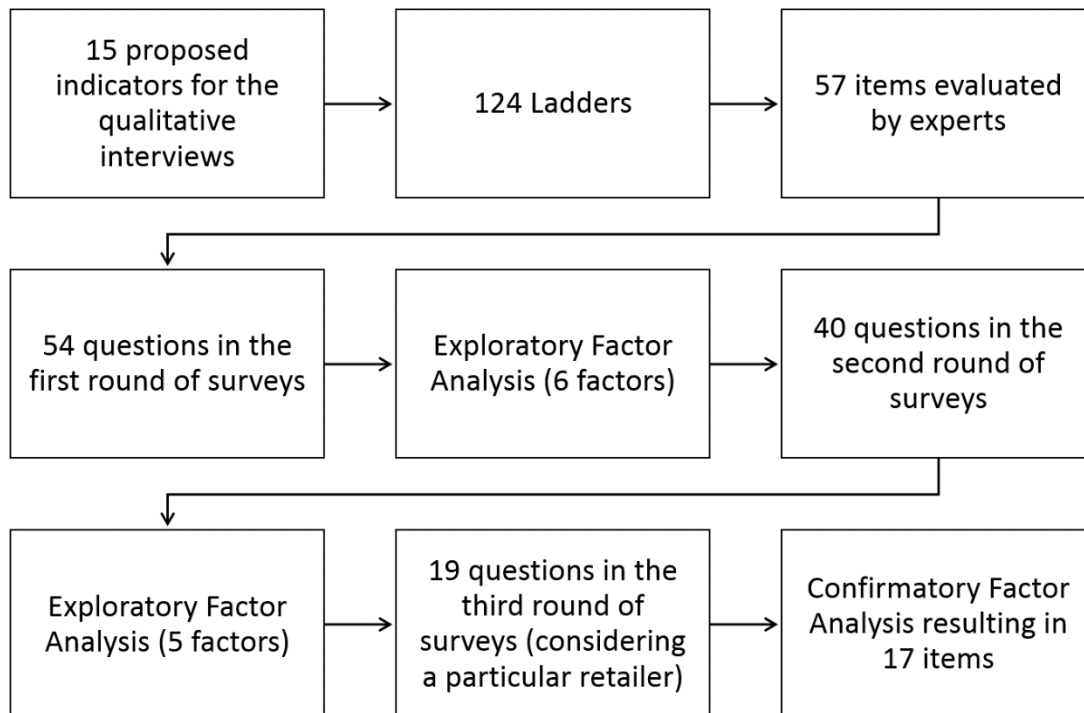
Source: Developed by the author, 2019.

Finally, the scale that attempts to measure omnichannel perception, without O8 and O11, is the one in Table 25. It has 17 items, which were again relabeled, belonging to the 5 constructs: PPSE, PROM, BOPS, ADVA and INTE.

Table 25 - Final Scale

Final Label	Label in 3rd round	Label in 2nd round	Label in 1st round	Item	Construct
PPSE1	O1	OCPR8	OCP26	I can return, repair or exchange merchandise that I purchased online at any of this retailer's physical stores.	**Post–purchase services in omnichannel**

PPSE2	O2	OCPR10	OCP11	The physical store customer service center accepts the return or exchange of products purchased online.	
PPSE3	O3	OCPR12	New item*	Physical store provides after-purchase services for products purchased online.	
PPSE4	O4	OCPR14	New item*	If I need, I know I can have in-store assistance for something I bought online.	
PROM1	O5	OCPR36	OCP21	I can use coupons in store that I received online from this retailer.	**Omnichannel promotions**
PROM2	O6	OCPR39	New item**	In the physical store I can use coupons received by the website / App of this retailer	
PROM3	O7	OCPR38	New item**	On the website / App I can use coupons obtained offline from this retailer	
BOPS1	O9	OCPR22	OCP7	I can choose any physical store from this retailer to pick up my purchases made online.	**Buy-online, pick-up-in-store**
BOPS2	O10	OCPR23	OCP6	The physical store allows me to collect my online purchases myself.	
BOPS3	O12	OCPR25	New item**	I can buy in the social network and pick up at store	
ADVA1	O13	OCPR1	OCP53	With all these channels from this retailer, I get better offers	**Omnichannel advantages**
ADVA2	O14	OCPR4	OCP50	With all these channels from this retailer, I save time	
ADVA3	O15	OCPR6	OCP17	I feel that using different channels or technologies during the shopping journey will benefit me at this retailer.	
ADVA4	O16	OCPR7	OCP31	I feel I have more assertiveness in my purchase with this retailer because I can move through channels	
INTE1	O17	OCPR28	OCP18	I can interact with this retailer on any channel at any time.	**Interaction with the retailer**
INTE2	O18	OCPR29	OCP19	I can interact with this retailer using the channel I want anytime	
INTE3	O19	OCPR32	New item**	I can interact (ask questions, make suggestions or complaints) with the retailer using the website	

Source: developed by the author, 2019.
*Items that were complemented from the first to the second round for being well evaluated by the experts.
** Items that were complemented from the first to the second round according to the literature.

The first construct, which refers to Post-Purchase Services in Omnichannel, brings questions concerning assistance and services provided by the retailer after the purchase itself. A special attention is given to return, repair or exchange. Bernon, Cullen and Gorst (2016) find that omnichannel returns management has yet to mature. It is perceived by the results of our scale that, return policies, as well as all sort of assistance post-purchase, demand a special attention from retailers.

Coupons play the leading role in the second construct, Omnichannel Promotions. They are also considered by Saghiri et al. (2017) as important channel types. According to Liu (2019), they have different uses online and offline, demanding a scientific exploitation, specially due to Mobile

changes in this. In the Brazilian retail context, more specifically, coupons seem to be a blurry subject, and also a yet to mature sales promotion strategy.

Although there had been the attempt to consider other omnichannel scenarios, such as buy-in-store-ship-direct (BSSD), BOPS, which is the buy-online, pickup-in-store was the only one that remained until the final version of the scale. With three items, the third construct brings BOPS strategy, which is the most studied one when referring to omnichannel (MURFIELD et al., 2017; GAO; SU, 2017).

Advantages of using omnichannel is the fourth construct. Better offers, saving time and more assertiveness are issues that were considered. In a similar scale, but developed for cross-channel behavior, Porto and Okada (2018) seeked to find its benefits. Although different, the results can be related.

Finally, the last construct, is concerning the interaction of the customer with the retailer in whatever channel he or she desires. From the consumer point of view, full interaction is a key issue (BECK; RYGL, 2015). The number of touchpoints, that are points of interaction with the retailer, have increased, main due to digital technologies (LEWIS et al., 2014).

4.3.5 Predictive validity

After all the steps mentioned in the previous section and achieving an ultimate amount of 17 items and 5 factors to measure omnichannel perception (see 4.3.3), I then decided to test its predictive power, moving from an exploratory to a structural model.

The relation of the use of channels with satisfaction is long established. Bowersox and Morash (1989) alleged that distribution channels should be ordered in such a way as to result in customer satisfaction. More specifically in omnichannel, Murfield et al. (2017) share the concern to know how consumers respond to this integration and how it impacts on satisfaction and loyalty.

With the purpose of testing its predictive power, the five constructs from omnichannel perception (PPSE, PROM, BOPS, ADVA and INTE) became the independent variables, while the dependent variable was a conjoint variable merging (1) Satisfaction with the ubiquity of channels of that retailer; (2) Recommendation of this retailer due to its ubiquity of channels; and (3) Intention to use more channels from this retailer. The result of this causal relation is as follows in Figure 13.

Figure 13- Causal Model
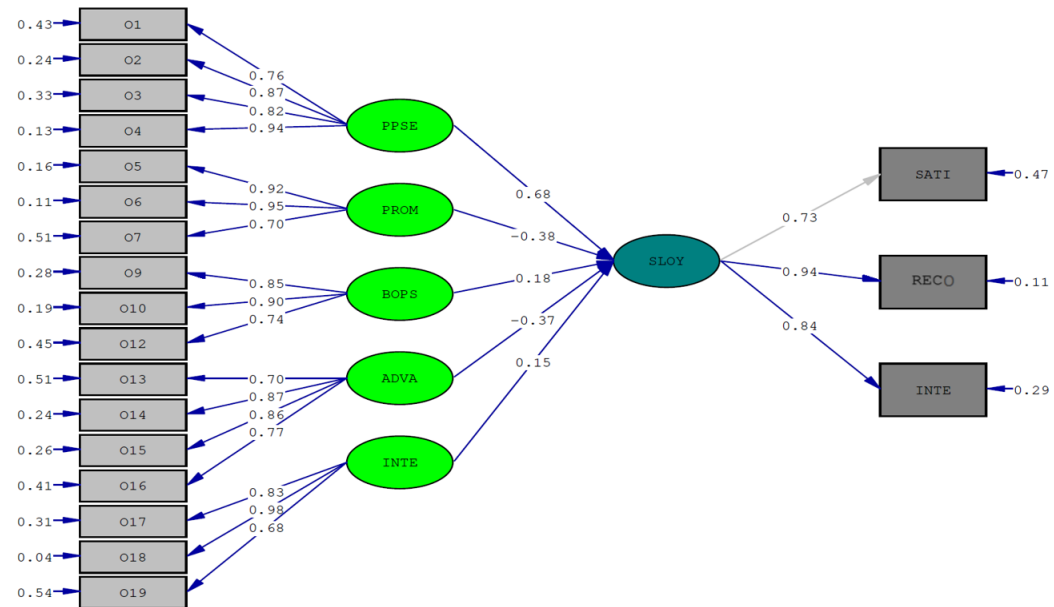
Source: LISREL outputs, 2019

Excluding variables O8 and O11, a well-fitting model emerged (X^2 = 723.36; df = 155; P-value = 0.00000; and RMSEA = 0.139). Only the first construct, PPSE (Post-purchase services in omnichannel), with its four items (O1, O2, O3 and O4), had statistically predictive power (0.68, t= 3.13) to the dependent variables satisfaction, recommendation and intention to use more channels. For this research, the t value must be out of the $-1.96<p<1.96$ confidence interval, with 95% confidence level (HAIR, Jr. et al, 2009). This first result supports Murfield et al. (2017), who studied the impact of logistics service quality on the omnichannel consumer satisfaction and loyalty, enhancing this a consumer-oriented supply chain.

PROM and ADVA were negatively, yet non-statistically related to the dependent variables (-0.38, t= -1.85; and -0.37, t= -1.93, respectively), while BOPS and INTE relations with the dependent variables were not statistically strong enough to be supported (0.18, t=1.55; and 0.15, t= 1.15 respectively). The t value, that is the loading factor divided by the error of the causal model, is as follows in Figure 14.

Figure 14 - Causal Model With T Values
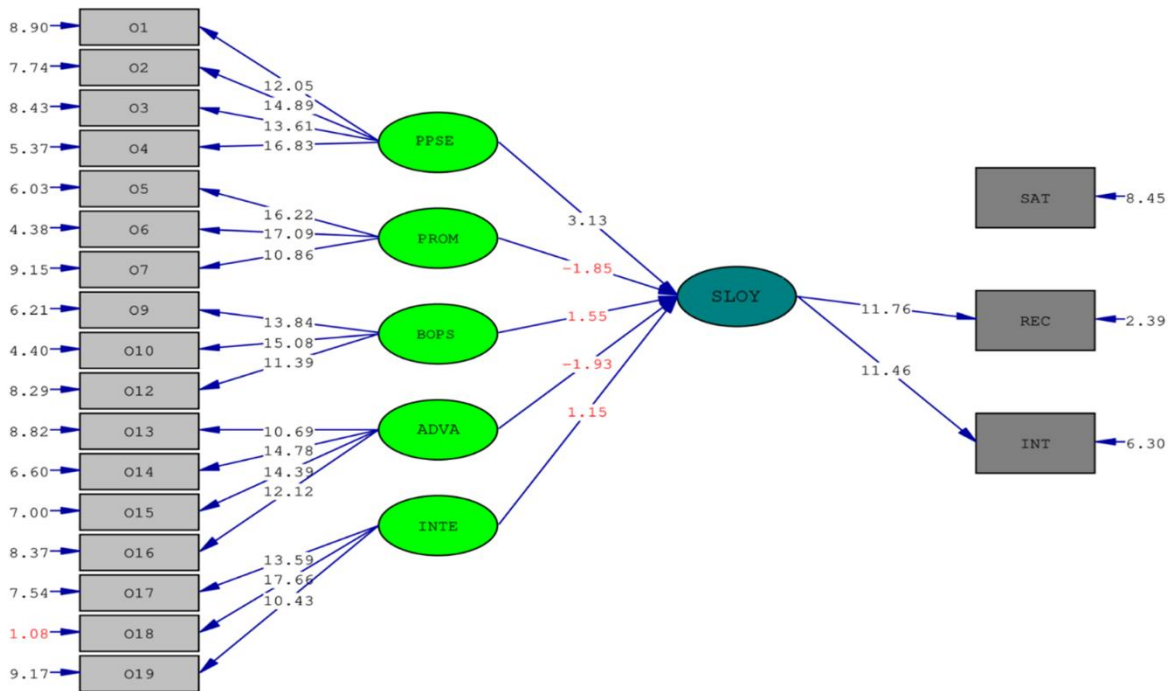
Source: LISREL output, 2019.

After all the literature, interviews, panel of experts and also three rounds of survey, I revisited literature was once again, and new configurations of the model were tested. These simulations of different layouts are in the next subsection (4.3.5.1).

4.3.5.1 New simulations with the results

After analyzing the numbers of the predictive power (see 4.3.4) of the scale, I wondered why only one of the constructs statistically leads to satisfaction, recommendation and intention to use more channels. And then, new simulations with the results of the research were run. Since the only construct to have relation to the dependent variable was Post-Purchase Services in Omnichannel (PPSE), the relationship suggested was that the other constructs (PROM, BOPS, ADVA and INTE) could anteced PPSE, and, then, lead to satisfaction, recommendation and intention to use more channels from that retailer.

This first simulation, presented in Figure 15, shows that, in fact, there is a strong evidence of this new relation.

Figure 15 - New Simulation 1
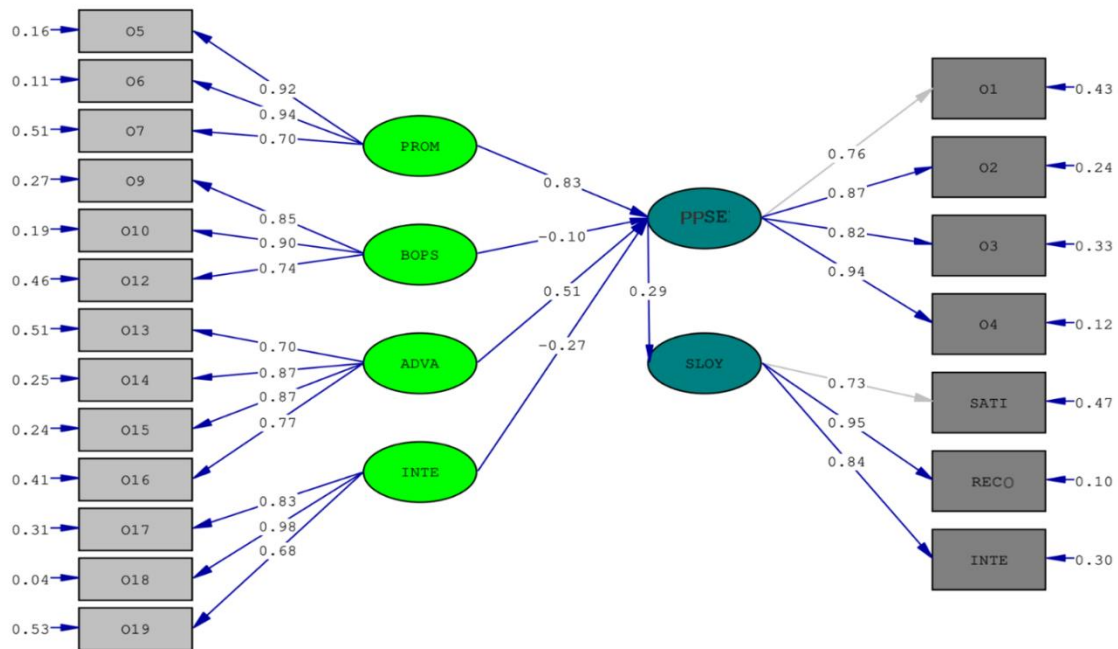
Source: LISREL output, 2019.

As seen in Figure 14 and 15, there is a strong evidence (0.83, t= 9.93) that Omnichannel Promotions (PROM) is positively related to Post-Purchase Services in Omnichannel (PPSE). Not so strong, but also statistically evident (0.51, t= 5.37), is the relation between Omnichannel Advantages (ADVA) and PPSE. However, BOPS was not statistically related (-0.10, t= -1.43) to PPSE, while INTE was negatively related (-0.27, t= -3.76) with PPSE. This simulation brings evidences that there is a different configuration of the constructs ($X^2 = 729.27$; df = 159; P-value=0.00000; and RMSEA = 0.138). PSSE was already related to loyalty (SLOY), and, had a positive relation (0.29, t= 3.58). For this new simulation of the variables position, the t values indicated a better fit, as it is shown in Figure 16.

Figure 16 - New Simulation 1 With T Values
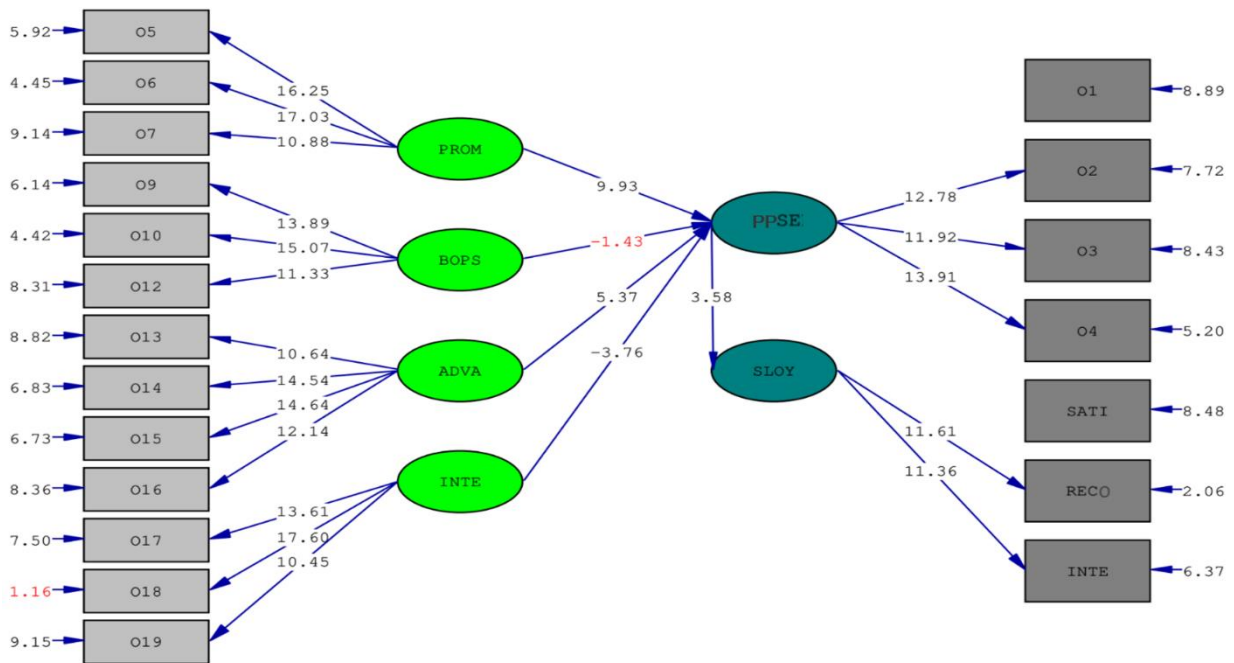
Source: LISREL output, 2019.

It is interesting to note that the adoption of BOPS influences negatively in PPSE, which can be explained that customers who adopt this shopping method do not demand as much returns or exchanges. Ma, Su and Oh (2014) shared that retailers using BOPS must really solve customer´s complaints, and provide attentive follow-up services. On the other hand, BOPS may bring advantages for the retailer, such as cross-selling, effect, because the customer goes to the physical store and may buy additional products; and channel-shift effect because they can be converted into store customers (GALLINO; MORENO, 2014).

And then finally, the last simulation resulted in all of the relations being significant. First, Omnichannel Promotion (PROM), as shown before as well, has a positive and strong relation (0.82, t= 10.06) with Post-Purchase Services in Omnichannel (PPSE). Also, BOPS and INTE influence positively (0.51, t= 6.74; and 0.45, t= 6.33 respectively) the Omnichannel Advantage (ADVA), which then leads (0.42, t= 5.71) to PPSE. PPSE, in turn, leads to Loyalty (0.29, t=3.63). The loads can be seen in Figure 17 and the t values in Figure 18.

Figure 17 - New Simulation 2
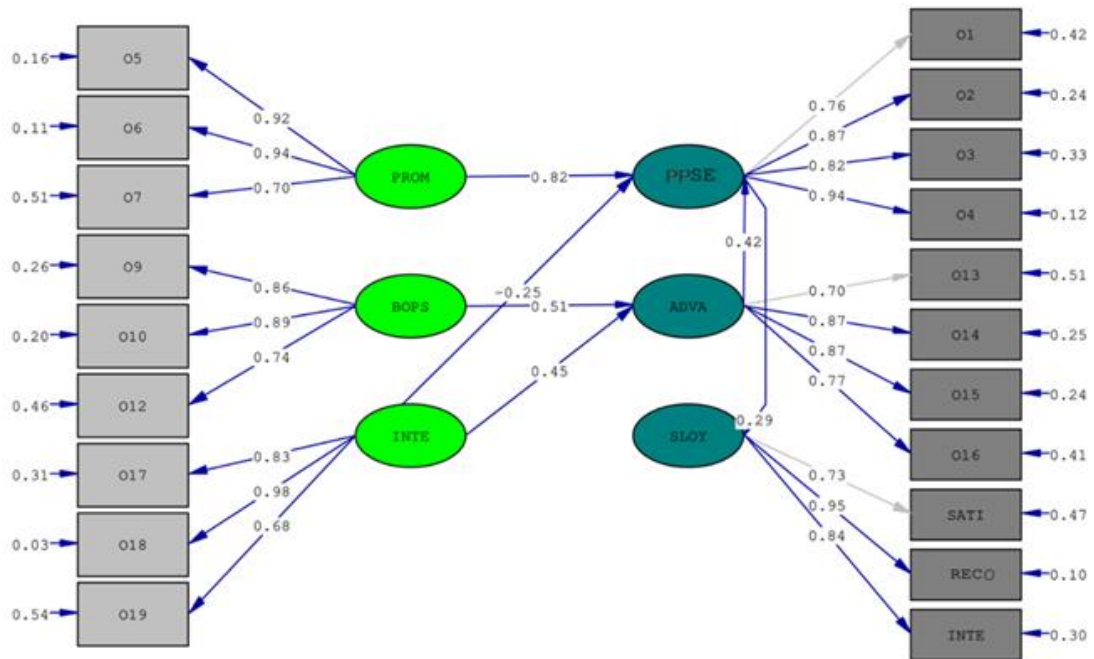
Source: LISREL output, 2019.

This last simulation resulted in a well-fitting model ($X^2 = 735.56$; df = 161, P-value = 0.00000; and RMSEA = 0.137). And, with t values, the last simulation is presented in Figure 18.

Figure 18- New Simulation 2 With T Values
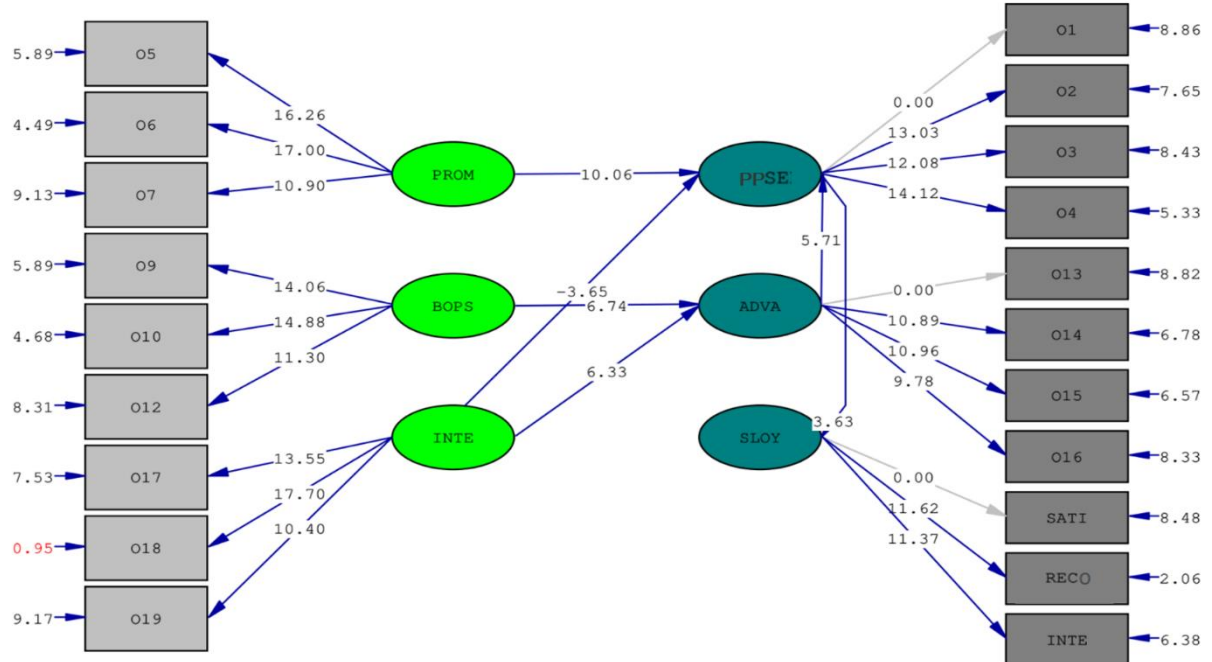
Source: LISREL output, 2019.

The results match the idea that omnichannel customers can interact with the retailer using countless channels, and that they benefit from the combined advantages of physical stores and online ones (RIGBY, 2011).

Thus, taking into consideration all the results, it can be suggested that the scale measuring omnichannel, in the customer´s perception, has all of these five elements organized as an interaction chain, which can lead to loyalty with a particular retailer. Even though findings are not enough to predict an omnichannel behavior, they bring substantive and useful contributions to better understand this phenomenon from the customer´s point of view.

Based on these statistical evidences, along with causal explanation, this last model appeared to have the best fit of the two.

5 CONCLUDING REMARKS

There has been a shift on the literature of channels, as an increasing number of studies related to omnichannel can be seen. It is a rising reality. On the other hand, as present as it can be in nowadays transactions, its complexity brings a series of challenges, once the consumer has been attacked by ubiquitous information about products and services. Take, for example, the introduction to the special issue on multi-channel retailing on the special issue of Journal of Retailing (VERHOEF; KANNAN; INMAN, 2015) highlighting the prevalence of omnichannel studies with performance, while only one paper related to multi-channel was published.

It is also interesting to note that a change in channel also means a change in the consumer behavior (DHOLAKIA et al., 2010), mainly due to the advance of new technologies that have changed the consumer habits. This everywhere information about everything at anytime may be confusing or shifting the consumer behavior, as discussed about in the new reality (omnichannel) and this must receive a special attention (JUANEDA-AYENSA; MOSQUERA; SIERRA MURILLO, 2016).

As Verhoef et al (2015) defend, multi-channel in giving space to omnichannel. It is clear that the academy is heading to study more and more omnichannel, once it is a recent topic and has been having a great market acceptance, which shows its practical relevance. This way, it is expected that scholars pay as much consideration as they have done to studying the several facets of multi-channel in an omnichannel environment. Given that there are scales used for multichannel and cross-channel integration, an omnichannel scale from the consumer´s perception becomes necessary in order to measure how customers perceive this full interaction and integration of all channels from a given retailer, influencing the consumer behavior in this perspective.

However, there has not been found any scale that measures omnichannel perception, as it has for Cross-Channel Integration (LI et al., 2017). This new study intends to solve this research gap in literature, using both qualitative and then quantitative approaches (CHURCHILL, 1979; ROSSITER, 2011) for scale development and validity. In order to bring a more practical contribution, the study attempts to find how consumers perceive omnichannel in retailers. It also considers satisfaction, recommendation and intention to use more channels from that retailer as possible outcomes.

The issues raised by this thesis can be exploited not only by researchers, but also by practitioners of marketing, since it unveils important values to consumers, when expecting a ubiquitous and seamless shopping experience. Results of all the research steps show that this is still a blurred field, with issues to be answered.

After literature, interviews were performed, and the qualitative information shared by interviewees were analyzed by content analysis and transformed into ladders, using the A-C-V stages. Then, a panel of experts refined the scale and brought important considerations for the study. After that, three rounds were necessary to reduce the number of items of the scale and achieve an explainable amount of constructs. After all the steps developed, 17 items belonging to the following constructs were achieved: Post-purchase services in omnichannel (PPSE), Omnichannel Promotions (PROM), Buy-Online, Pickup-In-Store (BOPS), Omnichannel Advantages (ADVA) and Interaction with the Retailer (INTE).

So, it was perceived that the subject has constantly been cited and investigated in literature. However, science is not well acquainted of this phenomena as a whole, characterizing as a fertile field for academic research.

5.1 THEORETICAL CONTRIBUTIONS

Theoretically, this study contributes to marketing, specially on the literature on multi-/omnichannel retailing and to consumer behavior in channels. This customer perception allowed us to identify items that need more attention (PPSE, PROM, BOPS, ADVA and INTE). However, it not only brings academic/scientific contributions to marketing, but also to management as a whole, once the issues concerning channels involve the other areas of a company, such as Human Resources (specially with training of staff), Finances (it involves investments in technology, for instance), Production (the eagerness of "everything, everywhere, anytime"), and, evidently, the clear relation to Logistics, shown along the thesis.

Besides, the development and validation of a scale for such an incipient phenomenon contributes to understand it better in the customer perspective. Researches concerning the subject are recent, and progress needs to be made. Likely, the steps that were carefully planned, merging qualitative/subjective contributions to quantitative/objective results contribute to scholars who fear to use both methods. This way, not only Churchill (1979), but also Rossiter (2011) were used.

An innovation of this study was the use of means-end theory for omnichannel perception. Laddering is usually used for understanding attributes, consequences and values of goods. It was a challenge to adapt this method for channels, once it consists of intangible assets.

5.2 MANAGERIAL IMPLICATIONS

As managerial implications, the study exposed how consumers perceive value in this new reality, and although there is still a great path to advance towards an integrated and interacted retailing when it comes to channels, understanding how consumers feel and what they have been expecting in this sense can be a starting point for several retailers that seek to stand out in this competitive market.

In the managerial point of view, the results from this thesis contribute to identify the main practices from retailers that customers seek in order to have an ubiquitous shopping experience.

For instance, it was clear that the causal effect of post-purchase services in omnichannel lead to loyalty, measured by satisfaction, recommendation and intention to use more channels. Retailers should be aware of the importance of assistance, return and exchange for this customer, making this process easier and more convenient across channels.

Following an international pattern, BOPS was the leading shopping type for the respondents. The possibility of buying online and picking up at store has already been adopted by some retailers. The importance of this strategy goes beyond convenience for the customers. It may actually bring additional store sales, once, according to Gallino and Moreno (2014), the customer goes to the physical store and may buy additional products (cross-selling effect), and become store customers (channel-shift effect). Also, Akturk, Ketzenberg and Heim (2018) found that 28% of BOPS sales resulted in new sales, with this additional selling in the physical.

Promotions in omnichannel may also increase sales performance of the retailer. This research focused on coupons used across channels, which is increasingly been used by Brazilian companies. For Montaguti, Neslin and Valentini (2016), marketing campaigns, can increase the number of multichannel customers and also their profitability, since they are more profitables than the ones who use only one channel. So, promotions in order to persuade them to use more than one channel are welcome, although, as repeatedly seen in the interviews, customers do not want to be induced to use a specific channel because they have a "special offer", emphasizing the case of smartphone

applications (APPs), mainly because of the storage space they take up, but also because they want to be free to use whatever channel they intend to.

5.3 LIMITATIONS AND SUGGESTIONS TO FUTURE RESEARCHES

Since this study had as limitations the use of surveying in one culture only, future researches are necessary in order to understand this phenomenon in other environments, enabling comparisons of the results found with other environments and cultures. Although I have used both qualitative interviews and quantitative surveys, besides the panel of experts, other methods can bring different implications from this seamless shopping experience. Also, to better understand new scenarios in omnichannel, experimental researches may trigger important results. For instance, the use of new technologies that have been changing customer´s habits, as Juaneda-Ayensa, Mosquera and Murillo (2016) defend, must receive a special attention.

Scales are often redesigned. Since this was a first attempt to measure omnichannel perception, it it strongly suggested that future researches continue the study. Such as Tu, Khare and Zhang (2012) shortened the 19-item scale to measure consumers´ local-global identity developed by Zhang and Khare in 2009, developing and validating an 8-item scale scale for the same phenomena. So, it is possible that the scale developed here will help future researches to redesign ours.

Although it was tested with an specific retailer, brand was not considered. In omnichannel, Piotrowicz and Cuthbertson (2014) advocate that the interaction between the customer and the brand is more important than on the channel used, since they are all managed together. So, for future researches, brand should also be considered.

Verhoef, Kannan and Inman (2015) stated that multichannel is giving space to omnichannel. So, future researches are supposed to study the several facets of omnichannel environment as they did with multichannel. Besides, future investigations may take advantage of the multidisciplinary nature of the omnichannel, with coopertative researches involving not only marketing scholars, but also logistics, human resources, finances and production ones.

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APPENDIX 1 - Proposed indicators

These indicators were developed based on the Cross-Channel Integration (CCI) scale (LI et al., 2017), along with omni-channel characteristics seen in the theoretical background (VERHOEF et al, 2015; HÜBNER; WOLLENBURG; HOLZAPFEL, 2016; JUANEDA-AYENSA et al, 2016; BECK; RYGL, 2015)

OBJECTIVE INDICATORS:

1: Perception of synchrony of promotions highlighted by the Website or the Mobile with physical store

2: Synchrony of information (such as address, contact, and availability of products) online and offline.

3: The physical store allows customers to self-collect their online purchases.

4: The customers can choose any physical store from which to pick up their online purchases; as well as receive at home any product bought in physical stores (BOPS and BSSD).

5: Customers can access their prior integrated purchase history, for online and offline purchases.

6: The in-store customer service center accepts return, repair or exchange of products purchased online.

7: The Website provides post-purchase services such as support for products purchased at physical stores. Or the physical store provides post-purchases services for products bought online.

8: There is a perception of seamless retail experiences in any channel that the customer chooses to use

9. Along with physical stores, online website, and direct marketing, the mobile channels have been a special part of the buying process.

10. Along with physical stores, online website, and direct marketing, the social media has been a special part of the buying process.

11. Feeling real interaction shopping across channels anywhere and at any time

12. Feeling no barriers between channels

13. Preference to try new and different products or channels and seek out new experiences requiring a more extensive search

14. Perception of ease associated with consumers´use of different touchpoints during the shopping experience.

15. Perception that using different channels or technologies during the shopping journey will provide consumers with benefits

APPENDIX 2 - Laddering interview script

Considering channels as physical store, online website, direct marketing (catalogs), mobile channels, social media, have you ever used more than one to perform a single purchase? For instance, looking for the product online, trying it in a physical store, purchasing using the mobile and receiving at home? Think about a situation where you really perceive integration and interaction among these channels.

1. Name, gender, age, education and income.
2. Tell me about a situation where you used more than one channel (online vs. offline) in one single purchase, in different stages or the same ones.
3. What motivates you to use more than one channel at the same shopping experience?
4. Why do you use these channels?
5. Do you feel real interaction of communication and information across channels anywhere and at any time?
6. Do you feel real interaction of product availability (inventory) across channels anywhere and at any time?
7. Do you compare prices in all channel possible?
8. Do you simultaneously seek for information in different channels?
9. In order to compare prices and seek for information in all channels, do you think that you have enough means (such as internet connection and mobile)?
10. Do you interact with the retailer (doubts, suggestions or complaints) across channels?
11. Do you perceive that for some category of products you prefer a certain "combination" of channels? What is it?
12. How often do you use interacted channels?
13. Do you perceive any barriers between channels?
14. After you purchase something in the category you chose before, how do you monitor your order?
15. If you need to return or exchange the product, do you use different channels?
16. What motivated you to start using more than one channel in the same shopping journey?

17. After all these questions, do you consider yourself an omni-shopper, that is, a person who buys anything, anytime, anywhere, with any channel?

    IF SO
    a) Do you think channels interfere in your choices?
    b) Does this availability of things anywhere, anytime make you buy more?
    c) What would make you stop using a certain channel?

    IF NOT
    a) Why don´t you interact more with channels?
    b) Are you afraid of using new technologies?
    c) What would make you start using omnichannel?

18. After all these questions, what advantages over single, multi or cross-channel does omnichannel have?
19. What would make you stop using several channels for the same shopping experience?

APPENDIX 3 – Laddering content analysis

Content analysis of the laddering interview, with attributes, consequences and values, and their respective quotes from interviewees.

Code (participant and ladder)	Attribute quote	Attribute	Consequence quote	Consequence	Value quote	Value
1 (1.1)	Mainly mobile use	M-shopping	Instead of going to five or six stores and losing two hours, in five minutes you make the purchase	Saving money and/or time	it is important to see that I got a better price, it makes me feel happy because I got the best condition, that I went after it and got it, a feeling of accomplishment.	Achievement
2 (1.2)	comparing prices in every possible channels	Movement across channels	price is very important. If I find out that I paid more in one place and it's cheaper in the other …	Comparison	I get frustrated	Hedonism
3 (1.3)	this availability of products everywhere and any time	Movement across channels	it is important due to the diversity and to compare…	Comparison	Because you have access to everything, the limit is how much you want to spend…	Self-direction–action
4 (1.4)	Instead of packing and taking it in the mail, and they just give me the credit and send another product when mine gets there, and that takes time (exchangin).	Movement across channels	I can deliver it to the store, they change it on the spot, it's much more practical	Convenience	I would love it	Hedonism
5 (2.1)	using more than one channel in the same experience	Movement across channels	Price is important, because I save money	Saving money and/or time	so I have the resources to buy other things that make me happy	Power–resources
6 (2.2)	Online we have this information in	Discrepancy between channels	I have wasted my time in the	Saving money and/or time	And I got frustrated	Hedonism

	real time, while in the physical store this not always happens...		(physical) store			
7 (3.1)	I try to pre-select on the internet so I only look at one or two models physically	Movement across channels	For practicality	Convenience	I value my time a lot. in my profession, my working hour is very expensive	Power–resources
8 (3.2)	comparing prices in every possible channels	Movement across channels	Usually, to make the best deal	Choice confidence	I know how much it costs to earn that money	Power–resources
9 (3.3)	It allows me to shop anywhere and any time...	M-shopping	and it brings practicality	Convenience	The feeling that I have access to everything that those who live in the capital also have, I am no longer "isolated" because I am in the countryside.	Stimulation
10 (3.4)	we know more about what we are about to buy (moving across channels)	Movement across channels	The purchase becomes more assertive	Choice confidence	And my chances of making a mistake are lower	Security–personal
11 (3.5)	Omnichannel	Movement across channels	My purchase is more assertive	Choice confidence	I feel I can buy anything and any time	Self-direction–action
12 (4.1)	checking how the other consumer evaluated that product	Reviews from other consumers	comparing prices and quality	Comparison	to see if I can trust, if they are reliable…	Security–personal
13 (4.2)	I think they complement each other, I like it when a store has an online service	Consistency between channels	even more for the day to day, this practicality is worth	Convenience	To enjoy other things, to enjoy my time...	Hedonism
14 (4.3)	I look for (things) in every possible way	Movement across channels	To make the right decidion	Choice confidence	Because I am a very insecure person	Security–personal
15 (4.4)	I have been talking to physical store sellers on WhatsApp	Interaction with the retailer	Then I do not waste my time with these things	Saving money and/or time	I value my time, I could be working or enjoying with my friends	Hedonism

16 (5.1)	So I can search the product	Movement across channels	And be certain of that I am buying	Choice confidence	Not to regret later	Security– personal
17 (5.2)	I can migrate (from one channel to another) easily	Movement across channels	it is very good to find product and save time…	Saving money and/or time	I feel credibility, trust…	Security– personal
18 (5.3)	comparing prices in every possible channels	Movement across channels	so I can be absolutely sure I am paying the best price	Saving money and/or time	I feel very happy with a better price, it is an achievement	Achievement
19 (5.4)	mobile allows you to use channels "anytime, anywhere"	M-shopping	So I can be sure that I'm buying what I want, and not forced, because I liked it.	Choice confidence	This brings me freedom	Self- direction– action
20 (5.5)	finding information in many channels	Movement across channels	makes it easier for me to find what I am looking for…	Convenience	It is a freedom of search	Self- direction– action
21 (6.1)	I search a lot (among channels)	Movement across channels	Pra não fazer uma compra errada. Pra eu não desperdiçar meu tempo, dinheiro, enfim.	Choice confidence	when I have security, I will buy.	Security– personal
22 (6.2)	Because I am in the store window and at the same time I am comparing it with another one that is next door or one in São Paulo.	Movement across channels	...	Comparison	Gives me power of choice	Self- direction– action
23 (6.3)	I think the biggest advantage is that we know that we will find what we want as quickly as possible	Movement across channels	the access is very easy	Convenience	you can indulge yourself	Hedonism
24 (6.4)	in the pharmacy, for example, they say it (the product) is not available there, but they tell you where it is	Information of availability	not to waste time	Saving money and/or time	but I would really like this to happen in all segments	Stimulation

25 (7.1)	using more than one channel in the same experience	Movement across channels	Convenience is important, because of schedules, the type of service and time of service.	Saving money and/or time	I feel fine and buy again	Hedonism
26 (7.2)	I will use more channels (from a retailer)	Movement across channels	if they have more new options	Innovativeness	I have to trust in that brand	Security–personal
27 (7.3)	using more than one channel in the same journey	Movement across channels	I compare between physical and online	Comparison	And get happy with a good price	Hedonism
28 (8.1)	comparing prices in every possible channels	Movement across channels	if I save (money)	Saving money and/or time	I think I can have a good advantage in it	Power–resources
29 (8.2)	While I am at the physical store (simultaneously looking online)	In-store mobile search	I am never sure if that is a fair price	Comparison	Then (comparing simultaneously) I feel safer when I buy	Security–personal
30 (8.3)	Because today is not practical, there are many steps to be able to return something I bought online, pick up the box, pack it, take it in the mail ... sometimes I end up giving up returning it	Movement across channels	It would make things much easier	Convenience	I think it would be great	Stimulation
31 (8.4)	Knowing that they practice the same prices	Consistency between channels	For the economical advantage it brings	Saving money and/or time	I feel safer	Security–personal
32 (9.1)	comparing prices in every possible channels	Movement across channels	I compare in all of them	Comparison	Also for the sake of paying a fair price.	Universalism–concern
33 (10.1)	I didn't have the courage to go to the physical store (...) So I ended up looking on the website and on instagram	Movement across channels	I wanted to arrive there already showing that I was aware of the products.	Consumer Empowerment	I don't like to expose myself a lot, I am a shy person.	Humility

34 (10.2)	then I went to the physical store (after looking for that product online)	Movement across channels	and the product did not seem the same	Comparison	I am afraid	Security– personal
35 (10.3)	Instagram is one thing, Facebook other and the physical store is another. I can't see something on the website that I saw on the Facebook and I liked it.	Discrepancy between channels	Sometimes I try to go to multibranded websited	Comparison	I get irritated because channels are not integrated	Hedonism
36 (10.4)	I printed the Facebook advertisement of the product to show that it actually existed, that I wasn't lying	Discrepancy between channels	When I showed it, they apologized	Barriers between channels	But I felt humiliated, cheated	Face
37 (10.5)	I interact with the retailer (questions, suggestions or complaints) between channels	Interaction with the retailer	to be sure	Choice confidence	I don't want to have the feeling of being cheated	Face
38 (10.6)	I buy online and pick up at store	Movement across channels	for the control and practicality	Convenience	it brings safety	Security– personal
39 (11.1)	I don't like to arrive at the physical store without knowing what is there, so I prefer to look on the internet first	Movement across channels	Then, when I arrive at the store, I'm more secure. I feel like I made the right purchase	Choice confidence	no regrets	Security– personal
40 (11.2)	I ask questions, I ask those who already have (the product), I look on YouTube, on the blog.	Reviews from other consumers	To reassure me. The worst thing is to buy something expensive and then see that it was not quite that	Choice confidence	I try my best to avoid regret, frustration.	Security– personal
41 (11.3)	The interaction between channels	Movement across channels	because I feel bad spending more than I should	Saving money and/or time	I like to spend money with things that bring me well-being.	Hedonism

42 (11.4)	we arrived at the store my brother showed on his cell phone that it was cheaper on the internet	Discrepancy between channels	Then I realized I could be more aware	Consumer Empowerment	I was suspicious	Security– personal
43 (11.5)	see in a place and have to arrive in a place and have the feeling that it is organized	Consistency between channels	and I won´t waste my time	Saving money and/or time	it´s trust	Security– personal
44 (12.1)	Sometimes I exaggerate and look in 10 places	Movement across channels	I look for the best condition ... and I have a habit of keeping looking for the price after I bought it	Saving money and/or time	…and I feel great when I get it	Hedonism
45 (12.2)	Usually online first, then physically	Movement across channels	to avoid wasting time	Saving money and/or time	and not getting out of my routine	Self- direction– action
46 (12.3)	The information I look for on the internet, to see if the characteristics match.	Movement across channels	I have a distrust of the seller, because he is commissioned.	Consumer Empowerment	I feel safer looking on the internet	Security– personal
47 (12.4)	mobile allows using "anywhere any time"	M-shopping	This gives me time	Saving money and/or time	that I can work, enjoy…	Hedonism
48 (13.1)	I arrived at the store asking for that model in a color that I knew I had and didn't have in the store, but I showed it on my cell phone. At the end of the day, I ended up picking up the color they had at the store. If you have it here, you don't need a truck from São Paulo	Movement across channels	at least now I have it, I do not need to wait.	Saving money and/or time	I think about sustainability. I think about the logistical cost, if the product is close to me...	Universalism– nature
49 (13.2)	comparing online the	Reviews from other consumers	makes me sure of my purchase	Choice confidence	I get happy because it is something I am	Hedonism

	reviews, people using				really going to use	
50 (13.3)	I went to the physical store first, because it is a purchase of even more value and it is an item that should last even longer, I do not understand the technical information if I see it on the internet.	Movement across channels	It is better if a seller helps me	Convenience	brings me safety	Security– personal
51 (13.4)	When the purchase is not very routine or when the price is higher, I look. To find out if there is much difference.	Movement across channels	If I can get a discount and receive the product it seems like a smarter purchase	Choice confidence	I feel lucky and happy	Hedonism
52 (13.5)	using more than one channel in the same shopping experience	Movement across channels	I leave it there, save it for later to look.	Choice confidence	Helped me a lot with conscious consumption and sustainability	Universalism– nature
53 (14.1)	I went to the store at the mall, I said I had seen it on the internet, and he showed it to me and told me the price (that was different from online). It was exactly the same product, same color, it didn't change anything	Discrepancy between channels	the information was wrong	Barriers between channels	I got sad	Hedonism
54 (14.2)	It is much more practical for me to go on my cell phone or computer and look at a website that I know I will	Movement across channels	Look at the price, the size, the measurements, than going straight to the store	Comparison	I think I feel more pressured to buy when I'm at the physical store. On the internet the interaction is lighter, gives	Self-direction– action

	have a physical store to go and get and look at the product itself.				you the freedom to be at home	
55 (14.3)	I see that the internet facilitates this, I go to two physical stores only from there, it is not so much more work.	Movement across channels	so I don´t go to a store without searching online first	Consumer Empowerment	not to run the risk	Security–personal
56 (14.4)	the availability of products anywhere and anytime	Consistency between channels	I am sure of what I am buying	Assertividade na compra	And I am happy not to waste my money	Power–resources
57 (14.5)	Sometimes you are walking and face something and research there	In-store mobile search	I can be anywhere	Convenience	it gives me freedom	Self-direction–action
58 (15.1)	Then I like to search	Movement across channels	Not being outwitted. See that the price is right	Saving money and/or time	I have a suspicion that some places overpriced	Security–personal
59 (15.2)	I search online and offline	Movement across channels	and it brings assertiveness of my purchase	Choice confidence	store credibility. I don't know if it's not because of our culture, of this "Brazilian way", but I suspect.	Security–personal
60 (15.3)	If they give me physical support even buying online	Movement across channels	I prefer and trust if I have this support	Trust in retailer	brings more credibility	Security–personal
61 (16.1)	I don't use social networks, I use direct contact, face-to-face talking with the attendant, and online.	Interaction with the retailer	I use to look from all the retailers (social media, direct contact, presencially)	Trust in retailer	I perceive safety with this direct contact	Security-personal
62 (16.2)	I use the app to keep track of the products	M-shopping	The higher the value, the more I track	Trust in retailer	Now I trust	Security-personal
63 (17.1)	And I searched on the internet because for me it is the easiest way to search. I get there, I	Movement across channels	It is practical	Convenience	then you are free to do other things	Self-direction-action

	have several options, you have the store's own website. I can see and touch.				
64 (17.2)	The price difference was outrageous	Discrepancy between channels	Sometimes I think that retailers treat themselves as competitors (among channels).	Dissatisfaction	I think it harms me	Hedonism
65 (17.3)	If the price is the same in all channels	Consistency between channels	It is easier for me, it is a matter of practicality	Convenience	I feel freedom having this power of choice.	Self-direction-action
66 (17.4)	I think I should do more (...) I think about it, online will not be immediate. It will come later. So there's no problem researching later.	In-store mobile search	It may be that I miss opportunities ... It bothers me if I arrive and see that it was cheaper and I should have bought it at the store	Saving money and/or time	I feel upset with myself	Hedonism
67 (17.5)	Sometimes I didn't have it in the physical store but it was on the internet	Movement across channels	I think I buy better	Choice confidence	if I can choose	Self-direction-action
68 (17.6)	Combining channels is not linked to impulse buying. It is a more planned purchase...	Movement across channels	It may be that (my) impulse buying has decreased	Choice confidence	If you can find a way to spend a little less, it's good. Money is not infinite.	Power-resources
69 (18.1)	(I use) online store due to more variety of price and payment, but I use the physical store to try it (the product) on.	Movement across channels	To identify the same product	Choice confidence	I feel safer trying (them) on.	Security–personal
70 (18.2)	I went to look in a physical store, it was a price and in another one. Then I went to the website and ended up	Movement across channels	The situation I remember using these channels was to look for a product with a lower price.	Saving money and/or time	Not to make a mistake and throw the money away.	Power-resources

	buying over the internet.					
71 (18.3)	Searching in every possible channel	Movement across channels	because I have already had a shock with prices	Saving money and/or time	to ensure this…	Security– personal
72 (18.4)	I don't have to face a lines or parking... I feel very good about being able to shop at times I don't need to go downtown to buy, I can stay on my couch...	M-shopping	It means convenience, not having to leave my house at midnight or three in the morning to buy.	Convenience	a great sensation	Hedonism
73 (19.1)	I do to the store, try the product on, and buy online	Movement across channels	Because usually online is cheaper.	Saving money and/or time	The more I can save, the better.	Power– resources
74 (19.2)	with all these channels, for searching…	Movement across channels	self-service is facilitated	Convenience	I prefer to "self attend" myself than the person "annoying" me	Self-direction– action
75 (19.3)	If I am on the bus and I remember that I need to buy pants, I'll go to the store's website for example.	M-shopping	it means practicality	Convenience	I don't have to stress out with a salesperson. I prefer to have the information at hand.	Self-direction– action
76 (19.4)	Today several stores ask if I want to pick it up at the store or receive it at home, so why not return it at the store too?	Discrepancy between channels	...	Barriers between channels	It would be better, easier	Hedonism
77 (19.5)	I search before I buy (using all channels possible)	Movement across channels	And buy more consciously	Choice confidence	and regret less	Security– personal
78 (19.6)	using more than one channel in the same shopping experience	Movement across channels	to make a more assertive purchase	Choice confidence	I get happy	Hedonism
79 (20.1)	it´s a back and forth (of channels)	Movement across channels	It was an alternative to	Saving money and/or time	An alternative to seek some gain. It can be faster	Power– resources

			save at each stage		delivery or pick up at a nearby store.	
80 (20.2)	so many options of the same product with different combinations of price, freight, besides the deviations of information, codes, photo.	Discrepancy between channels	It is very difficult to find a product.	Barriers between channels	A negative experience	Hedonism
81 (20.3)	It is wonderful when you have a product that we are looking for and the information is clear and available.	Movement across channels	it gives me the impression of a well-prepared retailer, that invested in this (the consistency between channels), that is concerned about the information availability, of this exposure	Retailer image	it is clear, it is safe.	Security–personal
82 (20.4)	This price issue	Consistency between channels	know that you made a good purchase, at a fair price.	Choice confidence	greater peace of mind when buying. A security, a clarity.	Security–personal
83 (20.5)	mobile allows you to use channels anywhere, anytime	M-shopping	Not to pay 30% more on a product when you wouldn't need it.	Saving money and/or time	The smartphone helps to complete this process, to make you feel more confident that you are buying at the right price.	Security–personal
84 (21.1)	Purchases with low added value, I see no incentive to go after information or much detail (in many channels).	Movement across channels	If I go to two, three, four, five stores I will lose the whole day and spend money.	Saving money and/or time	time is money	Power–resources
85 (21.2)	I usually search a lot because of the comments of other users.	Reviews from other consumers	To find out what other people are thinking about	Choice confidence	to have more security of what I'm buying	Security-personal

		that product, to see if it meets my expectations. It helps me a lot.			
86 (21.3)	I looked for something on the internet that (the retailer) was supposed to have in the physical store. I went to the physical store and they didn't have it.	Discrepancy between channels	This interaction is still very bad	Barriers between channels	You believe that, in one way or another, it will influence what you will think, what you will do, you organize for certain things, and in the end it doesn't happen.	Security-personal
87 (21.4)	inside a physical store I have already looked for that same thing on the internet	In-store mobile search	Because I thought there was something strange about the price, the characteristics of the product	Barriers between channels	I was wondering if in fact the product I was looking at in the physical store would meet the needs I had.	Security-personal
88 (21.5)	looking for something on the internet, because the damn cell phone is at hand	M-shopping	it is something that will solve a problem for me immediately.	Convenience	in case I need to buy, I think it is very relevant. It is very interesting that this possibility exists.	Self-direction–action
89 (21.6)	not only mobile, but all these channels	Movement across channels	made my life easier	Convenience	More secure from the purchase I am making, you are much less "in the dark" today to buy something than you were 15 years ago.	Security-personal
90 (22.1)	I end up discovering more things, investigating on different channels.	Movement across channels	... To make better decisions	Choice confidence	I feel safer	Security–personal
91 (22.2)	comparing prices in every possible channels	Movement across channels	I prefer brands that I already know, then I compare these on different channels.	Comparison	When I see a very cheap price I don't believe it.	Security–personal

92 (22.3)	I generated the coupon on the App, made the reservation and used it in the physical store.	Movement across channels	sometimes I end up trying products that I wouldn't buy without the discount	Innovativeness	Mainly for that reason, I end up tasting things that I wouldn't do at the normal price... it's great, I use it a lot.	Stimulation
93 (22.4)	Sometimes I go to the restaurant and see the menu and think if it's really worth it to take it there or better take it home.	In-store mobile search	I feel very good when I take an opportunity, looking for (better prices) and not settling, to pay cheaper	Saving money and/or time	to feel smart or not to feel like I'm being cheated.	Security–personal
94 (22.5)	Yes, I stay late at night looking for something on my cell phone, in an app	M-shopping	It's good, it makes it easier anytime, in the palm of your hand.	Convenience	I feel fine with this	Hedonism
95 (22.6)	This (movement) gives me more information	Movement across channels	A more inteligent purchase	Choice confidence	I know about what I'm buying, I was more careful with the purchase and I may not be bothered or regret it.	Security–personal
96 (23.1)	The question of price, which is sometimes cheaper to buy in the store, sometimes on the internet	Movement across channels	I usually compare a lot in several channels, before making the purchase	Comparison	to check where it has the best cost benefit	Power-resources
97 (23.2)	I usually search all the channels I can at the same time	Movement across channels	to see what is the best time to buy, what is the best product	Choice confidence	For safety	Security-personal
98 (23.3)	I usually interact with some stores on whatsapp	Interaction with the retailer	question of asking for product, if they have it in the store, or giving some feedback on some product that I bought	Convenience	I think it's a great tool for them to improve and serve us	Stimulation
99 (23.4)	Mobile	M-shopping	it gives greater flexibility even by schedule, at night we come	Convenience	it is a safety that the brand offers	Security–personal

		home and need to look for something, it is even more practical.			
100 (24.1)	Then I look on the social network, on the websites	Movement across channels	So I get to a physical store knowing what to look for, what to ask…	Consumer Empowerment	Brings me safety for sure	Security–personal
101 (24.2)	the availability of products anywhere and anytime	Movement across channels	makes me buy more, but more consciously	Choice confidence	I think about what I want and what I can buy	Power–resources
102 (24.3)	Buying using App and going to the store to pick it up	Movement across channels	For those who live where a physical store is available,	Convenience	it is great	Stimulation
103 (24.4)	Sometimes I would like to go to a store because things are beautiful, but I'm not treated well there	Discrepancy between channels	...	Dissatisfaction	Face to face or online, you need to feel fine.	Hedonism
104 (25.1)	because it varies a lot, and in the virtual stores it is usually cheaper	Discrepancy between channels	I compare if it is worth it, for freight, time…	Comparison	Sometimes I prefer buying physically, because I am afraid of not well delivered products.	Security-personal
105 (25.2)	Online doesn't have this (physical) interaction, it is a self service	M-shopping	App gives me step by step, it is very easy	Convenience	I feel fine	Hedonism
106 (26.1)	The good thing about having this research stage is that you find other people's opinions and their experiences with the products	Reviews from other consumers	it can reinforce your opinion about the purchase or it can make you take a step back	Choice confidence	When you have access to that information, it can contribute significantly to making you more secure with your purchase.	Security-personal
107 (26.2)	Sometimes I see a price online and other offline	Discrepancy between channels	I was just upset about the image the store brings. The brand is saying it is	Retailer image	When this synergy exists, the consumer will trust more and this will avoid making a	Security–personal

			modern on the internet but when it comes to updating the price...		purchase with the feeling of insecurity. It would bring more security in that sense and confidence in the brand.	
108 (26.3)	Any channel you want to buy you will find the same price for the same product	Consistency between channels	Would bring more confidence with the brand	Retailer image	...	Security-personal
109 (26.4)	I think it would be very important to have this availability information	Information of availability	Because it saves our time	Saving money and/or money	And represents freedom of choice	Self-direction-action
110 (26.5)	Wherever you are, with your smartphone	M-shopping	mobile makes it easier to buy any product	Convenience	I feel a greater control over the situation	Security–personal
111 (26.6)	this store will answer me because it already has the culture, the positioning of having a more active relationship with the consumer.	Interaction with the retailer	These brands that relate well I already see with other eyes.	Retailer image	This weighs a lot when choosing the retailer. It gives me more security.	Security–personal
112 (26.7)	what motivates most (in this movement) is	Movement across channels	You can compare price, compare product information within the same journey. Before you would go to a physical store or two, look at two competitors	Comparison	it is boring and tiring to go to 10 stores.	Hedonism
113 (27.1)	I am used to merging online and offline	Movement across channels	searching for the best price	Saving money and/or time	It is a way I found to avoid regreting.	Security–personal
114 (27.2)	total detachment of marketing strategy ... ... inconsistencies between the	Discrepancy between channels	I perceive prioritization of one channel over another	Barriers between channels	I felt super bad .... I liked the strategy, but I didn't like to force myself, to diminish myself	Face

	channels that I find very unpleasant				because I only took the free sample.	
115 (27.3)	There are some products that I use different sources of information, electronic, I see in the physical store, I look online, I go on YouTube looking for influencers who evaluate products.	Reviews from other consumers	I already gave up on products I liked in the physical and online store, but the evaluations of technology influencers were bad	Comparison	I trusted in the influencer	Security-personal
116 (27.4)	simultaneously looking for things	In-store mobile search	and I showed him (the seller) that I found something different on my smartphone	Barriers between channels	I do not feel good (looking for something using the mobile while in the physical store), especially if there is a seller by my side…	Conformity–interpersonal
117 (28.1)	In fact what I do is point out the price differences between channels from the same retailer.	Interaction with the retailer	...	Comparison	Thinking about helping the seller…	Benevolence-caring
118 (28.2)	It allows interacting with the product and at the same time it has the possibility of searching for better prices and in the end always looking for the generation of savings, the lowest price, which is the essential point.	Movement across channels	...	Comparison	As I value the economy so much, I learn a lot with new tools, new ways, so this idea of searching for channels and connecting channels, allows me to search for quality products with the lowest possible value.	Power-resources
119 (28.3)	Mobile	M-shopping	I can control 4 or 5 times a day	Convenience	I get really excited	Stimulation

120 (28.4)	using more than one channel in the same experience	Movement across channels	the possibility of saving money is enormous for some products	Saving money and/or time	And I am tightfisted	Power–resources
121 (29.1)	Depending on the store, the service is the same (online and offline).	Consistency between channels	I made a call to a store and it was wonderful, I feel like it's okay.	Convenience	...	Hedonism
122 (29.2)	sometimes they exaggerate the price	Discrepancy between channels	I see that you always have to be comparing...	Comparison	Very happy when I buy cheaper	Hedonism
123 (29.3)	I can be on the bus looking for products	M-shopping	This means that the world is evolving a lot, but it is great and it has to continue like this, making it easier for everyone	Convenience	...	Stimulation
124 (29.4)	almost the majority (force to download the app), with discount on the first purchase, with free shipping.	Discrepancy between channels	I don't like it because it's the way they abuse customers and make customers buy more.	Retailer image	I like using the app, but I don't like being forced to download one.	Self-direction–action

APPENDIX 4 – INVITATION TO EXPERTS

Dear Dr. ...

I have been developing a scale to measure Omnichannel Perception for my doctoral thesis, at the Doctorate in Administration of the Federal University of Rio Grande do Sul (UFRGS), under the guidance of Professor. Dr. Luiz Antonio Slongo. I have already developed the qualitative phase, and before testing it with a survey, I am asking for channel researchers (more specifically omnichannel) to join the Panel of Experts. I take this opportunity to invite you to participate in the previous evaluation of the Omnichannel Perception Scale.

Since omnichannel has been arising in Brazil and not many retailers have really adopted this strategy yet, we have been attempting to measure how integrated and interacted customers perceive the shopping experience is in a specific retailer. After exposing this new area of inquiry, and the marketing academia claim for more studies in this area, the present study is expected to answer the problem found: how do customers perceive omnichannel?

Specially in the Brazilian context, where omnichannel has been emerging, a scale to measure the perception of omnichannel seems relevant, to check if customers do perceive the integration and interaction among channels. Also because in the qualitative phase using Laddering Interview Technique, all (16) the respondents answered that they expect more ubiquity, more integration and interaction from the retailers. But what variables are really important is still questionable. After this panel of experts, we intend to carry out at least two rounds of surveys, each one concerning a different Brazilian retailer.

Thus, in order to ensure the relevance of the proposed items in the scale, and to validate and robust the questionnaire, we understand that you, as an expert, could evaluate the relevance of the items generated, before we start collecting the quantitative data. If you agree to participate in the evaluation process, it will be composed of two phases: 1) you will first be sent the material for a first evaluation of the items, then once you receive your evaluation, your considerations will be discussed with the supervisor of this dissertation aiming at possible adjustments; 2) in a second moment, we will send you the updated material, for the final evaluation.

Therefore, we would like to highlight the great value of your participation in this research and thank you in advance for your cooperation.

Best regards,

Juliana Birkan Azevedo Doctoral Student (PPGA/UFRGS)
Professor Dr. Luiz Antonio Slongo (PPGA/UFRGS)

APPENDIX 5 – E-MAIL TO EXPERTS

Omnichannel Perception Scale

In order to measure how integrated and interacted customers perceive the shopping experience is in a specific retailer, the proposed indicators were developed based on an upgrade of the Multichannel Integration Scale from Frasquet and Miquel (2017), Cross-Channel Integration (CCI) scale (LI et al., 2017), Channel Integration Index (OH et al., 2012), along with omnichannel characteristics seen in the theoretical background (VERHOEF et al, 2015; HÜBNER; WOLLENBURG; HOLZAPFEL, 2016; JUANEDA-AYENSA et al, 2016; BECK; RYGL, 2015) and exploratory research results from in-depth interviews carried out with Brazilian customers.

The procedure we intend to use in the survey is shown after the proposed indicators.

Considering OCP (Omnichannel Perception) an attempt to measure how integrated and interacted customers perceive the shopping experience is in a specific retailer, please check the extent to which each item represents the construct: 1 (not at all), 2 (somewhat) and 3 (completely). Consider that the respondents will answer about a specific retailer. Please feel free to make suggestions or recommendations after the proposed indicators.

Code	Items	1 (not at all)	2 (somewhat)	3 (completely)
OCP1	The Website or Mobile highlights promotions that are taking place in the physical store			
OCP2	The Website or Mobile advertises the physical store by providing address and contact information of the physical store.			
OCP3	I feel a synchrony of information (such as address, contact, opening hours and availability of products) online and offline			
OCP4	The Website or Mobile allows me to search for products available in the physical store.			
OCP5	The retailer allows me to check the inventory status at the physical store through the Website or Mobile.			

OCP6	The physical store allows me to self-collect my online purchases.			
OCP7	I can choose any physical store from this retailer to pick up my online purchases.			
OCP8	I can receive at home any product bought in the physical store.			
OCP9	I notice this retailer knows me, keeping integrated purchase history of customers' online and offline purchases.			
OCP10	The retailer allows me to access their prior integrated purchase history in any channel.			
OCP11	The in-store customer service center accepts return, repair or exchange of products purchased online.			
OCP12	The Website or Mobile provides post-purchase services such as support for products purchased at physical stores			
OCP13	The physical store provides post-purchases services for products bought online			
OCP14	I feel real interaction shopping across channels anywhere and at any time from this retailer			
OCP15	I feel no barriers between channels from this retailer			
OCP16	I feel this retailer tries to ease consumers´ use of different touchpoints (points of contact or interaction) during the shopping experience.			
OCP17	I feel that using different channels or technologies during the shopping journey will bring me benefits in this retailer			
OCP18	I can interact with this retailer in any channel wide spread at that time			
OCP19	I can interact with this retailer using the channel I want at any time			
OCP20	On the website I can use my loyalty card or redeem coupons obtained offline from this retailer.			
OCP21	I can use online coupons in the physical store.			
OCP22	The Website or Mobile highlights promotions appearing in newspapers or pamphlets			
OCP23	The physical store highlights the Website or Mobile through pamphlets, receipts, and carrying bags.			

OCP24	The retailer´s brand name, slogan and logo are consistent in all channels			
OCP25	I can return, repair or exchange merchandise regardless of where I bought it from			
OCP26	I can return, repair or exchange goods I have bought online to any of this retailer´s physical stores.			
OCP27	I feel customer service is almost the same online and offline.			
OCP28	I feel the retailer is being fair with online and offline prices			
OCP29	Transiting through this retailer´s channels brings me freedom			
OCP30	Transiting through this retailer´s channels brings me satisfaction			
OCP31	I feel that I have more assertiveness in my purchase with this retailer because I transit through channels			
OCP32	I can check online if that product is in the store before I actually go there			
OCP33	If I need, I know I can complain online about something that went wrong in the physical store			
OCP34	If I need, I know I can have physical support of something I bought online			
OCP35	If I need, I know I can have online support of something I bought in the physical store			
OCP36	I feel free to use whatever channel I feel like from this particular retailer			
OCP37	This retailer never forces me to use a specific channel			
OCP38	This retailer never has special offers for only a specific channel			
OCP39	I feel that this retailer tries to facilitate this integration			
OCP40	(R) I notice that sometimes there are products in the catalog and not in other channels			
OCP41	I am willing to use more channels from this retailer			
OCP42	(R) I feel that in the physical store the retailer does not have as much information as online			

OCP43	(R) I feel that in the physical store the retailer does not know about the product as much as I get the information online			
OCP44	(R) I feel that in the physical store the retailer does not have as much products as online			
OCP45	(R) I feel that in the App the retailer does not have as much information as online			
OCP46	I like to check on social network evaluation from other consumers from this retailer			
OCP47	I like to check on social network new trends and products from this retailer			
OCP48	I feel that in different social network the retailer does not have the same availability of products			
OCP49	I like to know that I have access to everything, everywhere, any time in this retailer			
OCP50	With all these channels from this retailer, I save time			
OCP51	With all these channels from this retailer, I save money			
OCP52	With all these channels from this retailer, I get more sustainable when shopping			
OCP53	With all these channels from this retailer, I get better offers			
OCP54	With all these channels from this retailer, I find better products			
OCP55	I like to know that I can decide how I will buy a product from this retailer			
OCP56	I like to know that I can decide what channel I will use from this retailer			
OCP57	I like to know that I can decide how I will transit through channels from this retailer			

COMMENTS AND RECCOMENDATIONS: _____

_____

_____

Procedure: It is important to highlight that, before the scale, the respondents will get to know about which retailer they will answer the survey about. Then, they will select which channels from this retailer they usually use from this retailer. And if there is any channel that they would like to use, the reason they do not use it. Finally, the scale of omnichannel perception is provided.

Retailer: X

Channels I use from this retailer:
- ☐ Physical store
- ☐ E-commerce
- ☐ Mobile – Smartphone Application (App)
- ☐ Catalog
- ☐ Social Media
- ☐ Call center
- ☐ Others

Channels I would like to use from this retailer:
- ☐ Physical store
- ☐ E-commerce
- ☐ Mobile – Smartphone Application (App)
- ☐ Catalog
- ☐ Social Media
- ☐ Call center
- ☐ Others

Reason I do not use all channels I would like to: _____

APPENDIX 6 – EXPERTS EVALUATION

Code	Items	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Total
OCP1	I can choose any physical store from this retailer to pick up my online purchases.	3	3	3	3	3	15
OCP2	I notice this retailer knows me, keeping integrated purchase history of customers' online and offline purchases.	3	3	3	3	3	15
OCP3	The in-store customer service center accepts return, repair or exchange of products purchased online.	3	3	3	3	3	15
OCP4	I can return, repair or exchange goods I have bought online to any of this retailer´s physical stores.	3	3	3	3	3	15
OCP5	I can check online if that product is in the store before I actually go there	3	3	3	3	3	15
OCP6	The Website or Mobile allows me to search for products available in the physical store.	3	2	3	3	3	14
OCP7	The retailer allows me to check the inventory status at the physical store through the Website or Mobile.	3	2	3	3	3	14
OCP8	The Website or Mobile provides post-purchase services such as support for products purchased at physical stores	3	3	3	2	3	14
OCP9	The retailer´s brand name, slogan and logo are consistent in all channels	3	2	3	3	3	14
OCP10	If I need, I know I can complain online about something that went wrong in the physical store	3	2	3	3	3	14
OCP11	If I need, I know I can have physical support of something I bought online	3	3	3	3	2	14
OCP12	If I need, I know I can have online support of something I bought in the physical store	3	3	3	3	2	14
OCP13	The Website or Mobile advertises the physical store by providing address and contact information of the physical store.	2	2	3	3	3	13
OCP14	I feel a synchrony of information (such as address, contact, opening hours and availability of products) online and offline	3	3	2	3	2	13
OCP15	The physical store allows me to self-collect my online purchases.	2	2	3	3	3	13

OCP16	I can receive at home any product bought in the physical store.	1	3	3	3	3	13
OCP17	I feel customer service is almost the same online and offline.	2	2	3	3	3	13
OCP18	I feel free to use whatever channel I feel like from this particular retailer	1	3	3	3	3	13
OCP19	I like to know that I have access to everything, everywhere, any time in this retailer	3	3	1	3	3	13
OCP20	The retailer allows me to access their prior integrated purchase history in any channel.	1	3	3	3	2	12
OCP21	The physical store provides post-purchases services for products bought online	3	3	3	3	-	12
OCP22	I can interact with this retailer in any channel wide spread at that time	3	3	2	2	2	12
OCP23	On the website I can use my loyalty card or redeem coupons obtained offline from this retailer.	3	2	1	3	3	12
OCP24	I can use online coupons in the physical store.	3	3	1	3	2	12
OCP25	The physical store highlights the Website or Mobile through pamphlets, receipts, and carrying bags.	2	2	3	3	2	12
OCP26	I like to know that I can decide what channel I will use from this retailer	3	2	1	3	3	12
OCP27	I feel real interaction shopping across channels anywhere and at any time from this retailer	1	3	2	3	2	11
OCP28	I feel no barriers between channels from this retailer	1	3	1	3	3	11
OCP29	I feel this retailer tries to ease consumers´ use of different touchpoints (points of contact or interaction) during the shopping experience.	3	3	1	2	2	11
OCP30	I can interact with this retailer using the channel I want at any time	2	3	2	3	1	11
OCP31	I can return, repair or exchange merchandise regardless of where I bought it from	2	3	3	3	-	11
OCP32	Transiting through this retailer´s channels brings me freedom	3	2	1	3	2	11
OCP33	I like to know that I can decide how I will transit through channels from this retailer	3	2	1	3	2	11

OCP34	The Website or Mobile highlights promotions that are taking place in the physical store	2	2	3	3	C	10
OCP35	The Website or Mobile highlights promotions appearing in newspapers or pamphlets	2	2	3	1	2	10
OCP36	(R) I feel that in the physical store the retailer does not have as much information as online	3	1	3	2	1	10
OCP37	I like to know that I can decide how I will buy a product from this retailer	1	2	1	3	3	10
OCP38	I feel that using different channels or technologies during the shopping journey will bring me benefits in this retailer	1	3	1	3	1	9
OCP39	This retailer never has special offers for only a specific channel	1	1	3	2	2	9
OCP40	I feel that this retailer tries to facilitate this integration	1	2	2	2	2	9
OCP41	(R) I feel that in the physical store the retailer does not know about the product as much as I get the information online	1	1	3	2	2	9
OCP42	(R) I feel that in the physical store the retailer does not have as much products as online	1	1	3	2	2	9
OCP43	(R) I feel that in the App the retailer does not have as much information as online	1	1	3	2	2	9
OCP44	With all these channels from this retailer, I save time	3	1	1	1	3	9
OCP45	With all these channels from this retailer, I find better products	3	1	1	1	3	9
OCP46	Transiting through this retailer´s channels brings me satisfaction	3	1	1	1	2	8
OCP47	This retailer never forces me to use a specific channel	1	1	1	2	3	8
OCP48	(R) I notice that sometimes there are products in the catalog and not in other channels	1	1	3	1	2	8
OCP49	I feel that in different social network the retailer does not have the same availability of products	1	1	3	2	1	8
OCP50	With all these channels from this retailer, I save money	3	1	1	1	2	8
OCP51	With all these channels from this retailer, I get better offers	3	1	1	1	2	8
OCP52	I feel the retailer is being fair with online and offline prices	1	2	1	1	2	7

OCP53	I feel that I have more assertiveness in my purchase with this retailer because I transit through channels	2	1	1	3	-	7
OCP54	I am willing to use more channels from this retailer	2	1	1	2	1	7
OCP55	I like to check on social network evaluation from other consumers from this retailer	1	1	1	2	2	7
OCP56	With all these channels from this retailer, I get more sustainable when shopping	3	1	1	1	1	7
OCP57	I like to check on social network new trends and products from this retailer	1	1	1	2	1	6

APPENDIX 7 – SURVEY Omnichannel Perception (OCP) – First Round

The research you are about to answer is about the ubiquity of marketing channels, considering channels such as physical store, online store (e-commerce), direct marketing (catalogs), mobile channels (smartphone apps), call centers and social media. In addition, the purchase has several stages, such as recognition of a need or desire, information search, evaluation of alternatives (comparison), the purchase itself, and post-purchase (evaluation).

Please think of a company/brand from which you use more than one channel to make your purchases, for example, searching for the product online, trying it out at a physical store, buying using your mobile phone, and getting it home ...

Write here the brand you thought: _____

Please answer the questions by thinking about the brand you cited.

Sign the channels from this brand you use:

- Physical store
- E-commerce
- Smartphone Apps
- Social Media
- Call Center
- Catalog

Continue answering by thinking about the brand you cited:

	1.Totally Disagree	2	3	4	5	6	7.Totally agree
OCP1 The company's website/App highlights the promotions that are taking place in the physical store.							
OCP2 The company's website/App advertises the physical store, providing physical store address and contact information.							

OCP3 I feel consistency/synchrony of the company information (such as address, contact, opening hours and product availability) online and offline.							
OCP4 The website/App allows me to search for products available in the physical store.							
OCP5 The company allows me to check inventory in the physical store through the website/App.							
OCP6 The physical store allows me to collect my online purchases myself.							
OCP7 I can choose any physical store from this retailer to pick up my purchases made online.							
OCP8 I can receive at home any product purchased at the physical store							
OCP9 I perceive this retailer knows me, keeping my online and offline shopping history integrated.							
OCP10 This retailer allows me to access the purchase history integrated in any channel.							
OCP11 The physical store customer service center accepts the return or exchange of products purchased online.							
OCP12 The company's website / App provides after-purchase services, such as assistance with store-bought products.							
OCP13 Physical store provides after-shopping services for products purchased online.							
OCP14 I feel a true interaction buying on channels anywhere and anytime from this retailer							
OCP15 I do not feel barriers / inconsistencies between this retailer's channels							
OCP16 I feel this retailer tries to make it easier to use different branded touchpoints (channels) during the shopping experience.							
OCP17 I feel that using different channels or technologies during the shopping journey will benefit me at this retailer.							

OCP18 I can interact with this retailer on any channel at any time.							
OCP19 I can interact with this retailer using the channel I want anytime							
OCP20 On the website / App I can use my loyalty card or redeem coupons obtained offline from this retailer.							
OCP21 I can use coupons in store that I received online from this retailer.							
OCP22 The website / App highlights promotions that appear in newspapers, receipts or pamphlets							
OCP23 The physical store highlights the site / App through flyers, receipts and bags							
OCP24 Retailer brand name, tagline, and logo are consistent across channels							
OCP25 I can return, repair or exchange goods regardless of the channel that purchased it.							
OCP26 I can return, repair or exchange merchandise that I purchased online at any of this retailer's physical stores.							
OCP27 I feel that this retailer's customer service is the same online and offline.							
OCP28 Retailer practices the same prices Online and Offline							
OCP29 Moving through this retailer's channels gives me freedom							
OCP30 Moving through this retailer's channels brings me satisfaction							
OCP31 I feel I have more assertiveness in my purchase with this retailer because I can move through channels							
OCP32 I can check online if this product is in the physical store before actually going there							
OCP33 If I need, I know I can complain online about something that happened in the physical store							
OCP34 If I need, I know I can have in-store assistance for something I bought online.							

OCP35 If I need, I know I can get online assistance for something I bought at the physical store							
OCP36 I feel free to use whatever channel I want from this retailer							
OCP37 This retailer never induce me to use a specific channel offering unique advantages for that channel.							
OCP38 This retailer never has special offers for just one specific channel.							
OCP39 I feel this retailer is trying to facilitate this channel integration							
OCP40 I realize that the products in the catalog are the same as all channels in this retailer.							
OCP41 I am willing to use more channels from this retailer							
OCP42 I feel the product information is the same online and offline							
OCP43 I feel that, in the physical store, sellers know the product as much as I have information online							
OCP44 I feel that in the physical store, the retailer has the same products as online							
OCP45 I feel that in the App the retailer has the same information as in the website							
OCP46 I know I can check this retailer's other consumer reviews on social networks							
OCP47 I know I can check out new trends and products from this retailer on social networks							
OCP48 I feel that in different social networks the retailer shows the same availability of products and information.							
OCP49 I like to know that I have access to anything, anywhere and anytime at this retailer							
OCP50 With all these channels from this retailer, I save time							
OCP51 With all these channels from this retailer, I save money							

OCP52 With all these channels from this retailer, I get more sustainable							
OCP53 With all these channels from this retailer, I get better offers							
OCP54 With all these channels from this retailer, I get better products							

Gender:

- Male
- Female

Age:

- 20 years old or younger
- From 21 to 40 years old
- From 41 to 60 years old
- More than 60 years old

City where you live: _____

Did you get satisfied with the synchrony/consistency of channels of this brand?

- Yes
- No

Would you recommend this brand due to its synchrony/consistency of channels?

- Yes
- No

APPENDIX 8 – SURVEY Omnichannel Perception (OCP) – Second Round

The research you are about to answer is about the ubiquity of marketing channels, considering channels such as physical store, online store (e-commerce), direct marketing (catalogs), mobile channels (smartphone apps), call centers and social media. In addition, the purchase has several stages, such as recognition of a need or desire, information search, evaluation of alternatives (comparison), the purchase itself, and post-purchase (evaluation).

Please think of a company/brand from which you use more than one channel to make your purchases, for example, searching for the product online, trying it out at a physical store, buying using your mobile phone, and getting it home ...

Write here the brand you thought: _____

Please answer the questions by thinking about the brand you cited.

Sign the channels from this brand you use:
- Physical store
- E-commerce
- Smartphone Apps
- Social Media
- Call Center
- Catalog

From 1 being Totally Disagree to 7 being Totally Agree, please check the items by thinking about the brand you cited:

OCPR1 With all these channels from this retailer, I get better offers
OCPR2 I know I can check this retailer's other consumer reviews on social networks
OCPR3 I know I can check out new trends and products from this retailer on social networks
OCPR4 With all these channels from this retailer, I save time
OCPR5 Retailer brand name, tagline, and logo are consistent across channels
OCPR6 I feel that using different channels or technologies during the shopping journey will benefit me at this retailer.
OCPR7 I feel I have more assertiveness in my purchase with this retailer because I can move through channels

OCPR8 I can return, repair or exchange merchandise that I purchased online at any of this retailer's physical stores.

OCPR9 If I need, I know I can complain online about something that happened in the physical store

OCPR10 The physical store customer service center accepts the return or exchange of products purchased online.

OCPR11 If I need, I know I can get online assistance for something I bought at the physical store

OCPR12 Physical store provides after-purchase services for products purchased online.

OCPR13 The company's website / App provides after-purchase services, such as assistance with physical store purchases.

OCPR14 If I need, I know I can have in-store assistance for something I bought online.

OCPR15 This retailer never has special offers for just one specific channel.

OCPR16 This retailer never induce me to use a specific channel offering unique advantages for that channel.

OCPR17 I feel that in the physical store, the retailer has the same products as online

OCPR18 I perceive this retailer knows me, keeping my online and offline shopping history integrated.

OCPR19 I can check online if this product is in the physical store before actually going there

OCPR20 The website/App allows me to search for products available in the physical store.

OCPR21 The company allows me to check inventory in the physical store through the website/App.

OCPR22 I can choose any physical store from this retailer to pick up my purchases made online.

OCPR23 The physical store allows me to collect my online purchases myself.

OCPR24 I can buy in the physical store and ask them to deliver at home

OCPR25 I can buy in the social network and pick up at store

OCPR26 I can buy in the social network and ask them to deliver at home

OCPR27 The company sends e-mails of products searched in the social network

OCPR28 I can interact with this retailer on any channel at any time

OCPR29 I can interact with this retailer using the channel I want anytime

OCPR30 I can interact (ask questions, make suggestions or complaints) with the retailer using the App

OCPR31 I can interact (ask questions, make suggestions or complaints) with the retailer using social network

OCPR32 I can interact (ask questions, make suggestions or complaints) with the retailer using the website

OCPR33 I can interact (ask questions, make suggestions or complaints) with the retailer in the physical store

OCPR34 I can interact (ask questions, make suggestions or complaints) with the retailer in the call center

OCPR35 On the website / App I can use my loyalty card or redeem coupons obtained offline from this retailer.

OCPR36 I can use coupons in store that I received online from this retailer.

OCPR37 On the website / App I can use my loyalty card from this retailer

OCPR38 On the website / App I can use coupons obtained offline from this retailer

OCPR39 In the physical store I can use coupons received by the website / App of this retailer

OCPR40 In the physical store I can take gifts or samples of offers I saw online

Gender:

- Male
- Female

Age:

- 20 years old or younger
- From 21 to 40 years old
- From 41 to 60 years old
- More than 60 years old

City where you live: _____

Did you get satisfied with the synchrony/consistency of channels of this brand?

- Yes
- No

Would you recommend this brand due to its synchrony/consistency of channels?

- Yes
- No

APPENDIX 9 – SURVEY Omnichannel Perception (OCP) – Third Round (specific retailer)

The research you are about to answer is about the ubiquity of marketing channels, considering channels such as physical store, online store (e-commerce), direct marketing (catalogs), mobile channels (smartphone apps), call centers and social media. In addition, the purchase has several stages, such as recognition of a need or desire, information search, evaluation of alternatives (comparison), the purchase itself, and post-purchase (evaluation).

Please answer the questions by thinking about Retailer X.

Sign the channels from Retailer X:
- Physical store
- E-commerce
- Smartphone Apps
- Social Media
- Call Center
- Catalog

From 1 being Totally Disagree to 7 being Totally Agree, please check the items by thinking about Retailer X:

O1 I can return, repair or exchange merchandise that I purchased online at any of this retailer's physical stores.
O2 The physical store customer service center accepts the return or exchange of products purchased online.
O3 Physical store provides after-purchase services for products purchased online.
O4 If I need, I know I can have in-store assistance for something I bought online.
O5 I can use coupons in store that I received online from this retailer.
O6 In the physical store I can use coupons received by the website / App of this retailer
O7 On the website / App I can use coupons obtained offline from this retailer
O8 On the website / App I can use my loyalty card or redeem coupons obtained offline from this retailer.
O9 I can choose any physical store from this retailer to pick up my purchases made online.
O10 The physical store allows me to collect my online purchases myself.
O11 I can buy in the physical store and ask them to deliver at home
O12 I can buy in the social network and pick up at store
O13 With all these channels from this retailer, I get better offers
O14 With all these channels from this retailer, I save time

O15 I feel that using different channels or technologies during the shopping journey will benefit me at this retailer

O16 I feel I have more assertiveness in my purchase with this retailer because I can move through channels

O17 I can interact with this retailer on any channel at any time.

O18 I can interact with this retailer using the channel I want anytime

O19 I can interact (ask questions, make suggestions or complaints) with the retailer using the website

Gender:

- Male
- Female

Age:

- 20 years old or younger
- From 21 to 40 years old
- From 41 to 60 years old
- More than 60 years old

City where you live: _____

Did you get satisfied with the synchrony/consistency of channels of Retailer X?

- Yes
- No

Would you recommend this brand due to its synchrony/consistency of Retailer X?

- Yes
- No

Do you intend to use more channeld from Retailer X?

- Yes
- No