

FUNDAÇÃO GETÚLIO VARGAS  
ESCOLA DE ADMINISTRAÇÃO DE EMPRESAS DE SÃO PAULO

JUAN MACHADO SANCHEZ

**Effect of price and in-store promotion on sales: A study of distinct regions in an  
emerging market**

SÃO PAULO

2016

JUAN MACHADO SANCHEZ

**Effect of price and in-store promotion on sales: A study of distinct regions in an  
emerging market**

Thesis presented to Escola de Administração  
de Empresas de São Paulo, Fundação Getúlio  
Vargas, for granting the title of Master in  
Business Administration

Research Area: Marketing

Thesis Advisor: Prof. Dr. Leandro Angotti  
Guissoni

SÃO PAULO

2016

Sanchez, Juan Machado.

Effect of price and in-store promotion on sales: a study of distinct regions in na emerging market / Juan Machado Sanchez. - 2016.  
85 f.

Orientador: Leandro Angotti Guissoni

Dissertação (MPA) - Escola de Administração de Empresas de São Paulo.

1. Mercados emergentes. 2. Comércio varejista. 3. Marketing – Modelos econométricos. 4. Vendas - Promoção. I. Guissoni, Leandro Angotti. II. Dissertação (MPA) - Escola de Administração de Empresas de São Paulo. III. Título.

CDU 658.82

JUAN MACHADO SANCHEZ

**Effect of price and in-store promotion on sales: A study of distinct regions in an emerging market**

Thesis presented to Escola de Administração de Empresas de São Paulo, Fundação Getúlio Vargas, for granting the title of Master in Business Administration

Research Area: Marketing

**Approval date:** 11/May/2016

**Research field:** Marketing

**Assessment date:** 11/May/2016

Thesis committee:

---

Prof. Dr. Leandro Angotti Guissoni  
(thesis advisor)  
FGV-EAESP

---

Prof. Dr. Delane Botelho  
FGV-EAESP

---

Prof. Dr. Edson Crescitelli  
FEA-USP

## **AKNOWLEDGEMENT**

It would not have been possible to write this thesis without the support of Leandro Guissoni and Jonny Mateus. Thank you so much for all the constructive discussions and the disposition to help me during this journey.

Special thanks to my parents, Walfredo Sgarbi and Marcia Caro, which have always encouraged me throughout my masters at FGV-EAESP.

Also thank all my classmates from MPA – Class of 2016 for the friendship and challenges faced together. Particularly, I would like to thank Rebeca Scheeffler, which was a great companion over the incessant hours of study.

## ABSTRACT

Increasing competition caused by globalization, high growth of some emerging markets and stagnation of developed economies motivate Consumer Packaged Goods (CPGs) manufacturers to drive their attention to emerging markets. These companies are expected to adapt their marketing activities to the particularities of these markets in order to succeed. In a country classified as emerging market, regions are not alike and some contrasts can be identified. In addition, divergences of marketing variables effect can also be observed in the different retail formats. The retail formats in emerging markets can be segregated in chain self-service and traditional full-service. Thus, understanding the effectiveness of marketing mix not only in country aggregated level data can be an important contribution. Inasmuch as companies aim to generate profits from emerging markets, price is an important marketing variable in the process of creating competitive advantage. Along with price, promotional variables such as in-store displays and price cut are often viewed as temporary incentives to increase short-term sales. Managers defend the usage of promotions as being the most reliable and fastest manner to increase sales and then short-term profits. However, some authors alert about sales promotions disadvantages; mainly in the long-term. This study investigates the effect of price and in-store promotions on sales volume in different regions within an emerging market. The database used is at SKU level for juice, being segregated in the Brazilian northeast and southeast regions and corresponding to the period from January 2011 to January 2013. The methodological approach is descriptive quantitative involving validation tests, application of multivariate and temporal series analysis method. The Vector-Autoregressive (VAR) model was used to perform the analysis. Results suggest similar price sensitivity in the northeast and southeast region and greater in-store promotion sensitivity in the northeast. Price reductions show negative results in the long-term (persistent sales in six months) and in-store promotion, positive results. In-store promotion shows no significant influence on sales in chain self-service stores while price demonstrates no relevant impact on sales in traditional full-service stores. Hence, this study contributes to the business environment for companies wishing to manage price and sales promotions for consumer brands in regions with different features within an emerging market. As a theoretical contribution, this study fills an academic gap providing a dedicated price and sales promotion study to contrast regions in an emerging market.

**Key-words:** Emerging markets, Retailing, Marketing – Econometric models, Sales - Promotion.

## RESUMO

O aumento da competição causada pela globalização, alto crescimento dos mercados emergentes e a estagnação dos mercados em países desenvolvidos levaram empresas de *Consumer Packaged Goods* (CPG) a direcionar sua atenção aos mercados emergentes. Estas empresas devem adaptar suas atividades de marketing as particularidades destes mercados para obter sucesso. Em um país classificado como emergente, diferentes regiões possuem distintas características. Adicionalmente, divergências no efeito das variáveis de marketing também podem ser observadas nos diferentes formatos de varejo. Os formatos de varejo em um mercado emergente podem ser classificados em autosserviço (*chain self-service*) e tradicional de serviço (*traditional full-service*). Desta forma, entender a eficácia do marketing mix não apenas no nível agregado de país pode ser uma contribuição importante. Na medida em que as empresas visam gerar lucros em mercados emergentes, o preço é uma importante variável de marketing no processo de criação de uma vantagem competitiva. Junto com o preço, variáveis de promoção como displays nas lojas e redução de preços são muitas vezes vistos como incentivos temporários para aumentar as vendas no curto prazo. Executivos defendem o uso de promoções como sendo a maneira mais confiável e mais rápida de aumentar vendas e o lucro no curto prazo. No entanto, alguns autores alertam sobre as desvantagens de promoção de vendas; principalmente, no longo prazo. Este estudo investiga o efeito de preço e promoção em lojas no volume de vendas em diferentes regiões dentro de um mercado emergente. A base de dados utilizada está no nível SKU para o suco, sendo segregada nas regiões do sudeste e nordeste brasileiro, correspondendo ao período entre janeiro de 2011 a janeiro de 2013. A abordagem metodológica de validação é quantitativa descritiva, sendo aplicado um método de análise de séries multivariadas e temporais. O modelo de vetor autorregressivo (VAR) foi utilizado para realizar a análise. Os resultados sugerem uma sensibilidade de preço semelhante na região do nordeste e do sudeste e maior sensibilidade de promoção em lojas no nordeste. Reduções de preço mostram resultados negativos no longo prazo (persistência do volume de vendas em seis meses) enquanto promoção em lojas teve resultados positivos. Promoção em lojas não mostra influência significativa sobre as vendas em lojas de autosserviço, por outro lado, preço demonstra não ter impacto relevante sobre as vendas em lojas tradicionais de serviço. Assim, este estudo contribui ao cenário executivo para empresas que almejam aperfeiçoar a promoções de vendas e precificação de suas marcas em regiões com diferentes características dentro de um mercado emergente. Como contribuição teórica, este estudo preenche uma lacuna acadêmica fornecendo um estudo de preço e promoção de vendas dedicado ao contraste de regiões em um mercado emergente.

**Palavras chave:** Mercados Emergentes, Comércio Varejista, Marketing – Modelos econométricos, Venda - Promoção.

## **GLOSSARY**

AIC: Akaike Information Criterion

BIC: Bayesian Information Criterion

CPG: Consumer Packaged Goods

CS: Chain Self-service

DF: Dickey-Fuller

GDP: Gross Domestic Product

SKU: Stock Keeping Units

TF: Traditional Full-service

VAR: Vector-Autoregressive

VECM: Vector-Autoregressive with error correction



## LIST OF FIGURES

Figure 1 – Traditional full-service (left side) and Chain self-service (right side) .....	37
Figure 2 – Brazil Retailing Sales .....	40
Figure 3 – Price effect on sales volume for CS stores in the southeast region .....	65
Figure 4 – Price effect on sales volume for CS stores in the northeast region .....	66
Figure 5 – In-store promotion effect on sales volume for TF stores in the southeast region ...	67
Figure 6 – In-store promotion effect on sales volume for TF stores in the northeast region ...	68

## LIST OF TABLES

Table 1 – Related marketing literature review .....	29
Table 2 – Variables detailing .....	53
Table 3 – Juice database statistics description.....	54
Table 4 – Unit root analysis for the Southeast market model .....	56
Table 5 – Unit root analysis for the Northeast market model .....	57
Table 6 – Lag test for the Southeast market model .....	58
Table 7 – Lag test for the Southeast market model .....	58
Table 8 – Cointegration test for the Southeast market model .....	59
Table 9 – Cointegration test for the Northeast market model .....	59
Table 10 – Results for the Northeast region .....	62
Table 11 – Results for the Southeast region .....	63
Table 12 – Hypothesis summary .....	72

## SUMMARY

<b>1. INTRODUCTION .....</b>	<b>13</b>
<b>2. LITERATURE REVIEW .....</b>	<b>17</b>
2.1. Marketing Mix Decisions (4Ps) .....	17
2.2. Price.....	18
2.2.1. Price market relevance and effectiveness.....	19
2.2.2. Price objectives .....	21
2.3. Sales promotion variables in retailing.....	21
2.3.1. Effectiveness of promotions.....	23
2.3.2. Short and long-term effects of promotion .....	25
2.4. Related marketing literature review .....	28
2.5. Marketing researches in emerging markets.....	35
2.5.1. Emerging markets characteristics in the marketing context.....	35
2.6. Retailing in emerging markets .....	36
2.7. Retail formats in emerging markets .....	37
2.7.1. Characteristics of self-service (CS) and traditional full-service (TF) stores.....	39
2.8. Brazilian context .....	39
2.8.1. Market heterogeneity.....	40
2.8.2. Socio-political governance .....	41
2.8.3. Unbranded competition .....	42
2.8.4. Chronic Shortage .....	43
2.8.5. Inadequate infrastructure.....	43
2.9. Hypothesis.....	43
2.9.1. Brazilian consumer style .....	44
2.9.2. Brazilian southeast and northeast characteristics .....	44
2.9.3. Category consumer detailing.....	45
2.9.4. Proposed hypothesis .....	45
<b>3. METHODOLOGY .....</b>	<b>50</b>
3.1. Data .....	50
3.1.1. Data characteristics .....	52
3.2. Analysis method.....	55
3.2.1. Unit root analysis .....	56
3.2.2. Lag test .....	57

3.2.3. Cointegration test .....	58
3.3. VAR model development.....	59
<b>4. RESULTS .....</b>	<b>61</b>
<b>5. DISCUSSIONS AND IMPLICATIONS.....</b>	<b>64</b>
<b>6. CONCLUSION .....</b>	<b>71</b>
6.1. Limitations and opportunities for further studies.....	74
<b>7. REFERENCES .....</b>	<b>76</b>

## 1. INTRODUCTION

The increasing competition caused by globalization, the high growth of some emerging markets and the stagnation of developed economies are motivating Consumer Packaged Goods (CPGs) manufacturers to drive their attention to emerging markets (Forbes, 2011; Kumar, Sunder & Sharma, 2015). As these markets evolve from the periphery to the center position, it is necessary to understand the market features and prospects of these markets (Sheth, 2011). However, Burgess and Steenkamp (2006) emphasize that “the existing body of research suffers from an important limitation; most of it has been conducted in high income, industrialized countries (HICs)”. Thus, it is essential for the field of marketing that researchers direct their attention to emerging markets.

Emerging markets have unique characteristics (Sheth, 2011). Therefore, it is necessary to rethink marketing planning to adequately accommodate them. The success of a brand in an emerging market is dependent on the extent to which its marketing mix is customized according to the unique characteristics of the market (Kumar, Sunder & Sharma, 2015). For example, variables such as price and its elasticity of demand are expected to be higher in these markets than in developed ones due to budget constraints (Burgess & Steenkamp, 2006). Based on that, it is necessary that companies operating in the consumer goods and retail industries develop an appropriate marketing strategy that can be different from the firms’ strategies in developed markets, which have a more homogeneous characteristics within regions and retail formats (Sheth, 2011; Burgess & Steenkamp, 2006).

Additionally, emerging markets present heterogeneous characteristics (Sheth, 2011). These countries can show different features depending on the region. For example, Brazil’s southern region enjoyed the highest spending per household in 2013, US\$26,739. On the other hand, the Northeast and North reached the lowest spending per household in 2013, being respectively US\$14,974 and US\$17,364 (Euromonitor, 2014f). The reduced GDP per capita in the northern region culminates in less income available after purchasing basic goods (Euromonitor, 2007). These different characteristics can lead to differences in marketing mix effectiveness for companies that operate in both regions within an emerging country.

In the context of marketing mix, price has a great impact on sales volume (Bijmolt, Heerde & Pieters, 2005). In addition, price is one of the most flexible marketing elements, being able to be altered rapidly (Diamantopoulos, 1991). Managers taking these characteristics into

consideration make use of this tool to generate sales growth and consequently short-term profits.

Price plays a key role in generating profits and ensuring the company survival in the long-term (Taher & Basha, 2006; Indounas & Avlonitis, 2009). Consequently, executives shall be aware that consumers may have distinct levels of price sensitivity in accordance to market segments (Rao, Bergen & Davis, 2000). Moreover, price effects on sales volume can be a function of products' business cycle (Bronnenberg, Mahajan & Wanhonacker, 2000).

On a similar level of relevance, sales promotions represent the main share of the marketing budget for most consumer packaged goods (Srinivasan, Pauwels, Hanssens & Dekimpe, 2004). Sales promotions are viewed as temporary incentives, which leverage consumer's brand choice (DelVecchio, Henard & Freling, 2006). Notwithstanding, consumers appreciate sales promotions more than companies realize (Farris & Ailawadi, 2013). Procter & Gamble and J.C.Penney, for example, faced great losses after cutting off sales promotions.

Authors defend sales promotion as a tool to reach short-term results (Rothschild, 1987; Gupta, 1988; Blattberg et al., 1995; Ehrenberg, Scriven & Barnard, 1997; Srinivasan, Pauwels, Hanssens & Dekimpe, 2004; Casielles & Alvarez, 2005). The sales promotion impact on sales can be propelled by exposing promoted products in temporary displays. Indeed, temporary displays have a considerable effect on brand sales (Bemmaor & Mouchoux, 1991; Pauwels, Hanssens, & Siddarth, 2002; Chandon et al., 2009). Temporary displays that expose products on promotion can enhance not only the brand choice but also the visual attention (Chandon et al., 2009).

On the other hand, some authors alert about disadvantages of sales promotions. The disadvantages encompass the decrease in brand loyalty and quality perception, increase in price sensitivity, and increase in brand switching (Keller, 1998; Gedenk & Neslin, 2000; DelVecchio, Henard & Freling, 2006). Based on that, the effects of promotion on sales in the long-term can be positive or negative (Keane 1997; Foekens, Leeflang, & Wittink, 1998; Jedidi, Mela, & Gupta, 1999; Ailawad et al., 2006; Ataman, Van Heerde, & Mela, 2010).

Marketing variables, such as price and promotion, have distinct effects on the different retail formats in emerging markets (Venkatesan et al. 2015). The retailing formats in emerging markets can be defined as chain self-service (CS) and traditional full-service stores (TF). As Brazilian retailing sales reached equal distribution between TF and CS stores in 2011 (Diaz,

Magni & Poh, 2012), this study of marketing variables effect on sales volume will consider these two store formats in the analysis.

Thereby, considering the above mentioned literature, the research questions (considering the CPG manufacturer perspective that sells products through different store formats and regions) are presented as follows:

- A) Do the effects of price and in-store promotions (i.e., products with promotions on displays) vary according to different regions in an emerging market? Specifically, to which extent do they vary from a market leader CPG company perspective?
- B) How do the effects of price and in-store promotions (i.e., products with promotions on displays) vary in two different retail formats (i.e., CS and TF stores) across different regions?

To answer this question, a database of the Brazilian retailing market from January 2010 to January 2013 will be used. The data contains monthly sales information for a specific beverage category in the Brazilian market such as: sales volume per category broke down by SKU (Stock Keeping Unit), sales price to the end consumer, activation of in-store promotion (i.e., products with promotions on displays), and weighted distribution of promotion by SKU. Furthermore, this database contains segregated information from the Brazilian northeast and southeast regions, permitting data comparison between these regions. The product category considered in this study is juice. The reasons for choosing this beverage category correspond to its high volume of brand movements such as brands entry and exit and market share, as well as its high growth in sales volume in the last years. From 2012 to 2013, juice faced the highest growth in beverage category, being 11.7% in sales volume (Nielsen, 2014). The variance in sales and price found while studying new growing categories instead of mature ones, such as carbonated soft drinks, can be an interesting contribution to the study of emerging markets.

This study employs a quantitative approach to manage the retailing sales variables and to integrate them to generate a single econometric model. As the data is broken down per month at SKU level and is segregated in two Brazilian regions, it can be defined as multivariate and temporal (Dekimpe & Hanssens, 2010). To analyze the data, a vector-autoregressive (VAR) model will be built. Indeed, the marketing literature recommends the usage of multivariate

models such as VAR to analyze temporal series due to their capability of checking marketing variables relationship (Dekimpe & Hanssens, 1995; Pauwels, 2004).

Therefore, this study contributes to the business environment for companies wishing to launch new brands of consumer products or repositioning their price and sales promotion decisions in different regions in an emerging market. Notwithstanding, understanding of the specific market characteristics is essential to achieve business growth through marketing initiatives and success of a brand in an emerging market (Kumar, Sunder & Sharma, 2015; Sheth, 2011; Burges & Steenkamp, 2013). As academic contribution, this study proposes to fill a gap in the literature by providing a dedicated study about the effects of price and in-store promotion sensitivity in the short and long-term in an emerging market such as Brazil. Previous authors used data from developed markets and marketing variables effect on sales are potentially distinct (Ehrenberg, Scriven & Barnard, 1997; Gupta, 1998; Pauwels, Hanssens & Siddarth, 2002; Bronnenberg, Mahajan & Vanhonacker, 2000; Casielles & Alvarez, 2005; Steiner et al., 2007; Ataman, Mela & Heerde, 2010).

The presented study is structured in six chapters. Chapter one corresponds to a brief introduction of the theme, containing its relevance and contribution to the literature and business environment. Chapter two addresses the literature review of the principal concepts of price, sales promotion and emerging markets as well as the hypothesis rational. Chapter three approaches the database and methodology which this study will apply to properly generate the data to answer the research question. Chapter four presents the results obtained from the VAR model. Chapter five discusses the expected results and their implications. Finally, chapter six encompasses the conclusion and limitations of this study, also providing opportunities for further researches.



## 2. LITERATURE REVIEW

This chapter introduces the main concepts of the marketing mix decisions and the relevant aspects of price and sales promotions for the development of the presented study. Focus is given to the effects on these two variables on sales.

Finally, the last section of this chapter shows a table contemplating previous academic publications, providing then a panorama of how this study fits and intends to aggregate to the literature.

### 2.1. Marketing Mix Decisions (4Ps)

Marketing application became very popular in the business world and in the academia (Semenik & Bamossy, 1992). However, it was only recognized as a corporate function approximately forty years ago (Semenik & Bamossy, 1992). Borden (1964) revealed that the most relevant contribution of marketing management is to understand customers' behaviour in answer of a specific stimulus. This author in 1948 proposed 12 marketing elements to better address devices in marketing programs. His marketing mix list encompassed: Product Planning, Pricing, Branding, Channels of distribution, Personal Selling, Advertising, Promotions, Packaging, Display, Servicing, Physical Handling, and fact finding and analysis.

E. Jerome McCarthy (1964), subsequently to Borden's research, defined only four marketing elements, grouping Borden's twelve elements. This concept corresponded to the four main areas of the marketing decisions process, which become widely called the 4Ps. The 4Ps encompass the elements of Price, Promotion, Place and Product. The relevance of such analysis resulted in researchers recommending all companies to use the marketing 4Ps as a manner of pursuing revenue generation (Semenik & Bamossy, 1992).

More specifically, Product decisions are related to the choice of product design, brand symbolism, and product characteristics such as: shape, colour and package. About the Pricing decisions, these correspond to price level definitions and pricing policies. Place decisions are related to the choice of channel and distribution network. At last, the Promotion decisions are the ones involving advertising and selling discounts (Shimp, 1993).

Although the 4Ps concept is widely disseminated, some researchers explored more "Ps" than the traditional ones (Booms & Bitner, 1981; Grönroos, 1994; Goi, 2005; Möller, 2006). For

example, Booms & Bitner (1981) suggested the addition of three more Ps to the original four, being: participants, physical evidence and process. Their idea was to adapt the marketing mix concept to the service environment. However, the marketing mix list can be short or long depending on the depth in which professionals want to reach in the classification and sub classification of the marketing variables (Borden, 1964).

Independently of the marketing mix variances, these elements must be deeply analyzed and interpreted in order to reach adequately marketing moves. Thus, as this study proposes to analyze the effect of price and sales promotion, these marketing elements must be better explored.

## 2.2. Price

Price is the monetary amount charged on the purchase of goods or services (Kotler et al., 2008) and represents an extremely important decision that a seller must take. Researches demonstrate that consumers consider price one of the most relevant purchasing decision factors (Arnold et al., 1983; Buyukkurt, 1986). Current competitive environment increased pricing decisions complexity, forcing companies to take faster, better and more frequent decisions (Monroe, 1990). Indeed, many executives consider price not only their great challenge but also their great weakness (Kotler et al., 2008).

Price can be viewed as means to signalize the sacrifice needed to purchase a good or service and as an indicator of the quality level (Dodds, Monroe & Grewal, 1991). Moreover, price considered reliable information, and then customers may deduce product's quality based on it (Abreu, 1994). Based on that, consumers can easily compare products by observing its prices (Lopes, Reis & Abuwaka, 1996). Consumers may infer that higher prices correspond to greater quality products. The trade-off between the sacrifice needed and quality leads to perceptions of value (Dodds, Monroe & Grewal, 1991). However, the value perceived by customers is an abstract concept because it correlates matters of price, quality and benefits (Rockefeller, 1986; Zeithaml, 1988).

The price perception has a great impact in customer satisfaction (Varki & Colgate, 2001), even affecting retailers' sales performance and its customer loyalty. This perception informs to the market the positioning proposed by a company to their products or services (Kotler & Keller, 2005).

Companies shall consider price in a broad context of customers purchase decision because price affects product competitive positioning (Semenik & Bamossy, 1992). Ford, GM and Chrysler during 90s offered subsequent price reductions. This practice resulted in customers waiting for the next price cut and potential customers moving away. Those potential customers were even thinking that if companies could not sell cars with low price it must mean that the product was not good.

Customers usually have a base of prices which they infer acceptable to pay for a specific good or service (Monroe, 1979; Monroe & Petroshius, 1981). Consequently, customers are reactive to high prices and suspicious of quality when prices are too low (Cooper, 1969).

### 2.2.1. Price market relevance and effectiveness

Price is one of the most flexible marketing elements, being able to be altered rapidly (Diamantopoulos, 1991). Additionally, price has a great impact in sales volume (Bijmolt, Heerde & Pieters, 2005) and corresponds to a powerful tool to obtain market-share in mature categories (Bronnenberg, Mahajan & Wanhonacker, 2000). Interestingly, market-share variation in new categories can achieve greater long-term effects (Bronnenberg, Mahajan & Wanhonacker, 2000). Managers taking these characteristics into consideration make use of this tool to generate sales growth and consequently short-term profits.

Despite the apparent benefits of price reductions to increase sales, managers shall be aware that consumers may have distinct levels of price sensitivity in accordance to market segments (Rao, Bergen & Davis, 2000). Then, companies that encompass a variety of segments and markets shall perfectly understand their consumers' response and then establish specific pricing strategies.

Companies' revenue generation is determined by the multiplication of the prices employed and the quantity of products sold, impacting directly their profitability (Boone & Kurtz, 1999). Consequently, price plays a key role in generating profits and ensuring the company survival in the long-term (Taher & Basha, 2006; Indounas & Avlonitis, 2009). Nevertheless, a company real value is its pricing power: the capability to raise prices and still keep market-share, in other words, without losing business to competitors (Forbes, 2014b).

As costs of producing and storing goods have been rising, companies are being pressured to increase prices (Farris & Ailawadi, 2013). Wal-Mart, the largest retailer in the world, for example, faced a gross margin reduction from 2010 to 2013. Result of higher labour costs and low margins in groceries business (Forbes, 2014a). Despite the impacts in company margins, the decision to increase prices scares retailers because it may leave them unprotected from competitors. Moreover, companies should minimize the impact of rising prices by offering different product versions with distinct prices (Farris & Ailawadi, 2013).

In this environment, companies must adapt its costs to the reality of increased competition. Lower costs allow companies to achieve good pricing conditions and great gross margins. Nevertheless, cost-efficient companies might lead others out of the market (Gultinan & Gundlach, 1996). For instance, the second biggest supermarket in United Kingdom, TESCO, announced price cuts of 25% on average for branded products (Felsted, 2015). Thanks to a cost reduction program implemented in the company. Similarly, Sainsbury, UK's third biggest supermarket group is reducing spending to subsidize one hundred fifty million pounds on price cuts (Felsted, 2014). Certainly, TESCO and Sainsbury movement will intensify price war in retailing market.

The exercise of pricing is becoming even more complicated (Forbes, 2012a). The internet and shopping comparison apps offered a great transparency for consumers to compare prices. This context brought an increased consumers' perception of the "right" price (Clifford, 2012). As power is shifting from the retailers to consumers, the scenario of retailing price war is expected to intensify.

The change in power is shifting the way companies define their pricing strategies. J.C. Penney, for instance, has implemented a pricing system which encompasses daily prices, lower month long specials and clearance prices. Additionally, Wal-Mart took the strategy to match competitors' price in case of Wal-Mart's price is higher (Clifford, 2012). Indeed, retailers' pricing strategy covers numerous approaches (Forbes, 2014b). In accordance to MIT Sloan Business School, pricing strategies normally correspond to one of the three following strategies:

- (1) Cost-based pricing: pricing method established by the product's cost plus a mark-up;
- (2) Competition-based pricing: price is defined based on competitors pricing decisions;

(3) Customer value-based pricing: price driven by a deep understanding of customer needs, valuation and forward-looking of price elasticity.

### 2.2.2. Price objectives

Similarly to other marketing mix variables, price must be driven by objectives. Semenik and Bamossy (1992) provided four different price objectives: (1) Return over investment; (2) Maintenance and increase of market participation; (3) Status Quo maintenance; and (4) Profit maximization. Additionally, these authors added that price objectives will only reach value if acting aligned with the corporate strategy.

In another perspective, Diamantopoulos (1991) described that the objectives of price can be summarized in two groups: Quantitative and Qualitative. The quantitative group address objectives easily measured such as: sales, return over investment, profit maximization, price differentiation, and others. Related to the qualitative group, this one corresponds to less measurable objectives which may refer to the company's long turn survival. One example of the qualitative group is branding creation with high prices and quality.

Furthermore, a study performed by Lanzilloti (1958) demonstrated that price decision making unit is the enterprise. Thus, price shall not considered isolated but in a global context. An interesting finding of this study is the correlation between price and investment decisions. Investment decision corresponds to a form of price decision that even can become part of the pricing policy. Once the company performs an investment, this decision determines a price and market-share to provide adequated return to the company.

### 2.3. Sales promotion variables in retailing

Sales promotion is considered an important part of the marketing mix since early 1970s when it has emerged. Importance that can be confirmed because of its representativeness in the main share of the marketing budget for most consumer packaged goods (Srinivasan, Pauwels, Hanssens & Dekimpe, 2004). For instance, U.S. packaged goods manufacturers have its sales promotional spending peaked at more than 50% of their marketing budget in 1990s (Ailawadi, Harlam, Cesar & Trounce, 2006). In fact, the promotional spending trend is to achieve even higher levels.

Academics define sales promotion as a marketing action whose objective is to have a direct impact on the company's customer behaviour (Blattberg & Neslin, 1990). Shimp (1993) in

combination to thoughts from Strang (1983)<sup>1</sup> and Naber (1986)<sup>2</sup> addressed a more precisely definition to sales promotion: “use of any incentive by manufacturer to induce the trade and/or consumers to buy a brand and to encourage the sales force to aggressively sell it. The incentive is additional to the basic benefits provided by the brand and temporarily changes its perceived price or value”. As illustrated by its definitions, sales promotion is a term that can indiscriminately embrace broad promotional activities. Thus, it is essential to understand what kind of marketing meanings sales promotion can represent.

Sales promotion in an upper level can: first, to involve actions for the manufacturer sales force to aggressively sell the product; second, to encourage retailers to store space to the product and to provide merchandising support; and third, to stimulate consumers to select the product over other brands. Consequently, there are mainly two promotion categories: trade-oriented promotion and customer-oriented promotion. The trade-oriented promotion corresponds to actions directed from manufacturers to retailers and intermediaries to promote product sale, such as: trade deals, cooperative advertising, trade contest and incentives, point-of-purchase materials, training programs, specialty advertising, and trade shows. On the other hand, the customer-oriented promotion methods are all addressed specifically to the consumption stimulation of end consumers (Shimp, 1993).

This study focuses its attention to consumer-oriented promotion. In accordance to Shimp (1993), there are eight distinct methods of consumer-oriented promotion:

- (1) Sampling: usage of distribution methods to give to consumers trail size products intending to instigate future product’s purchase;
- (2) Couponing: provide a cut-off price to the consumer when presenting the promotional coupon in the purchase moment;
- (3) Premiums: consumers receive a premium as a consequence of their purchase of a required product’s quantity;
- (4) Price-offs: price reductions in the brand’s regular price;
- (5) Bonus Packs: extra-quantity offered to the consumer at a regular quantity package price;

---

<sup>1</sup> Roger A. Strang, “Sales Promotion Research: Contributions and Issues”, unpublished paper presented at the AMA/MSI/PMAA Sales Promotion Workshop, Babson College, May, 1983.

<sup>2</sup> James H. Naber in his James Webb Young address at the University of Illionis, Urbana-Champaign, IL, October 21, 1986.

- (6) Refunds and rebates: manufacturer provides cash discounts or reimbursements to consumers who prove its consumption;
- (7) Contests and Sweepstakes: winner consumer from a raffle, for example, receives a prize, products, or cash.
- (8) Overlay and Tie-In: the combination of two or more promotion methods is called overlay. Tie-in or joint promotion corresponds to a marketing tool designated to promote two or more products simultaneously, combining compatible brands and products.

The in-store promotion concept being used in this study considers products in temporary displays with any offer involving price reductions, bonus packs, raffles and free gifts, encompassing all eight types mentioned by Shimp (1993). In other words, all in-store promotion activities that stimulate consumers' select decision.

Only in-store promotions realized from retailing to consumers in the moment of purchase is being considered in this study. Moreover, the promotion data is aggregated. No discrimination of the promotion's type used in the moment of purchase is done in database. For further information please refer to section 3.1.1 (Data detailing).

### 2.3.1. Effectiveness of promotions

Sales promotion is viewed as a temporary incentive which leverages consumer's brand choice (DelVecchio, Henard & Freling, 2006). Stockpiling, purchase time acceleration and brand switching are all characteristics that increase sales volume as a consequence of sales promotion (Gupta, 1988). Actually, consumers appreciate sales promotions more than companies realize (Farris & Ailawadi, 2013). Procter & Gamble and J.C.Penney are examples of this importance. P&G, for instance, cut off promotions and coupons during 90s. The result was losses on share value before the company return promotions. Similarly, J.C.Penney lost one billion dollars in 2012 when tried to cut back on the frequency of sales promotions.

Relevant business magazines and newspapers recurrently report articles regarding sales promotion. Forbes (2012b) published that consumers have a good response to promotions, coupons and discounts. The evidence of this characteristic is the fact that many companies reach success with this marketing strategy. Moreover, sales promotional efforts may be a powerful tool in difficult economic times to stimulate consumer spending.

The increasing importance that has been given to sales promotion can be explained by some perspectives observed in the market. Consumer responsiveness to money saving is one relevant factor in favour of sales promotions. As introduced in the Wal-Mart article by Business Week, price can be a crucial factor affecting customer purchase decisions. Additionally, price-related promotions have a strong consumer appeal (Shimp, 1993). Results from the NCH Consumer Survey demonstrates that on average 80,5% of consumers in United States used coupons from 1996 to 1999 (Shimp, 1993). Indeed, price-related promotions are defended as being the most reliable and fastest manner to increase sales (Aydinli, Bertini & Lambrect, 2014). The immediate sales boost caused by price-related promotions is a consequence of category incidence increase (early purchase), brand choice and purchase quantity (Pauwels, Hanssens & Siddarth, 2002). Category incidence raise due to consumer's timing acceleration to purchase. Brand choice enhances as result of consumers decision to switch to the promoted brand. At last, purchase quantity raise because consumers tend to have a stockpiling behaviour (Pauwels, Hanssens & Siddarth, 2002).

Along with sales promotions, temporary displays to expose products in promotion can boost sales effect. Indeed, the exposure of products with price discounts in displays to consumers improves brand choice and visual attention (Chandon et al., 2009). Temporary displays can have a considerable effect on brand sales (Bemmaor & Mouchoux, 1991; Pauwels, Hanssens, & Siddarth, 2002; Chandon et al., 2009).

As visual attention resulted from shelf space allocation positively impacts sales (Chandon et al., 2009), manufacturers push retailers to allocate their brands in the best shelf areas and temporary displays. Temporary display benefits correspond to the lower risk of a product to run out of stock as clerks closely monitors those displays and the higher potential to grab visual attention (Bemmaor & Mouchoux, 1991).

Moreover, the market pressure on managers to generate fast company results. Lots of academic research has demonstrated that temporary price-related promotions can expressively increase short-term brand sales (Blattberg et al., 1995). This reinforces the explanation of the interests deposited in using sales promotions intensively by manufacturers and retailers.

Another factor influencing promotions is the products' timing to maturity. The speed from product launch to maturity is faster than ever before (Quelch, 2007), resulting in an industries' commoditization. Once a product reaches its maturity managers need to rethink sales force



compensation and pricing. Based on that, sales promotion can be considered effective for boosting sales in product's mature stage (Blattberg, 1990).

Additionally, sales promotions increase traffic in store. Retailers commonly use sales promotions in their parking area such as raffle to call customers' attention (Semenik & Bamossy, 1992).

Sales promotion can support the launch of a new product (Collins-Dodd & Louviere, 1999). Part of products' launch problem is the consumer purchase habits. American families, for example, buy the same one hundred fifty products which includes around 85% of all their household needs (Schneider & Hall, 2011). Then, it is hard to get new products on consumers' radar. In this context, sales promotions can increase customer attention to the product being launched and reduce its purchase risk (Semenik & Bamossy, 1992). Gillette during the launch of "Sensor" used distinct sales promotion techniques to boost product's penetration.

At last, brands' demands are interconnected. Once a brand uses price-related promotion to increase sales, its players will face a sales reduction. Consequently, companies start to fight to obtain market-share through price reductions, resulting in a price war situation. In this context, price-related promotions become a weapon to maintain market-share. Once a company decide to cut its sales promotions (price reduction), it can observe short-term loss as a consequence of price advantage taken by players. Furthermore, if a company increase its price-related promotion, players can react providing similar benefits to consumers (Blattberg & Neslin, 1990).

### 2.3.2. Short and long-term effects of promotion

Sales promotion is viewed in the market as a powerful weapon to reach short-term results. Companies deciding to cut off promotions are putting in risk their sales and then their financial results (Farris & Ailawadi, 2013). Indeed, sales promotion can increase consumers' behaviour to purchase promoted products (Rothschild, 1987). In this context, sales promotion has the potential to stimulate the consumer to acquire a brand for the first time (Casielles & Alvarez, 2005). Moreover, sales promotion can help consumers to decide when in doubt about two similar products (Casielles & Alvarez, 2005).

Gupta (1988) decomposed sales boost caused by promotions. Results observed in Gupta's study using data from coffee market indicated that more than eighty four percent of sales

increase came from brand switching. Additionally, purchase acceleration accounted with less than fourteen percent while stockpiling represented less than 2% of the sales increase. In accordance to Gupta's study it can be inferred that sales promotion has positive short-term impacts.

Price reductions are the most frequently sales promotion used by companies (Casielles & Alvarez, 2005). An extensive body of academic research has demonstrated that price-related promotions can expressively increase short-term brand sales (Blattberg et al., 1995). Evidence shows that people can choose a specific product, even a strange brand, just because its price is cut (Ehrenberg, Scriven & Barnard, 1997).

Research made with a database of more than twenty product categories from a large U.S. Midwestern supermarket chain concluded that 97% of the brands which promoted a price reduction experienced positive immediate effects. The average immediate price-related promotion elasticity achieved was 3.59 (Srinivasan, Pauwels, Hanssens & Dekimpe, 2004).

Controversially, some authors alert about disadvantages of sales promotions. The disadvantages mentioned by Keller (1998) encompass the decrease in brand loyalty and quality perception, increase in price sensitivity and increase in brand switching. Reinforcing Keller (1998) claims, Gedenk and Neslin (2000) reported that sales promotion has a negative effect on loyalty. Additionally, consumers may attribute a negative perception toward the promoted brand when looking for reasons of why this specific brand needs promotion (DelVecchio, Henard & Freling, 2006).

DelVecchio, Henard & Freling (2006) published that beyond the promoted period sales promotions have neither positive nor negative effect. Their results showed that sales promotions can increase or reduce brand preference in accordance to the product's characteristics and the promotion used. Post-promotion results demonstrated to be more favourable when companies used coupons or premiums, leading to an increase in brands' preference. Product categories with few competitors resulted in greater negative effects in post-promotion period. Additionally, negative effects demonstrated to be more offensive to unfamiliar brands such as new or unknown. Price cuts and great promotions (more than twenty percent of the product's value) reached harmful results to brands' preference. At last, brands post-promotion preference may be inversely related to the value of the promotion realized.

Approaching price-related promotions more specifically, the long-term effects of this promotion tend not to follow the same trend as the short-term results. Recent researches show that short-term effects can run out in weeks or months, leaving just few or any permanent positive gains to the brand (Nijs, Dekimpe, Steenkamp & Hanssens, 2001; Srinivasan, Pauwels, Hanssens & Dekimpe, 2004). Along the same line, studies in the literature suggest even negative long-term impact of price-related promotions on volume sales (Foekens, Leeflang & Wittink, 1998; Jedidi, Mela & Gupta, 1999). However, there are other studies which suggest positive gains because of state dependence (Keane, 1997). Consequently, there are no convergent findings about price-related promotions long-term effects.

When analyzing long-term effect of price-related promotions, attention must be given to the country's development degree. Developed economies are less probable to show long-term effects of marketing actions than emerging markets (Bronnenberg, Mahajan & Vanhonacker, 2000).

Another aspect to consider when understanding price-promotion effects on sales is the market competitive structure. Price-related promotion is a function of categories' competitiveness structure (Nijs, Dekimpe, Steenkamp & Hanssens, 2001). A less oligopolistic market shall achieve reduced price-related promotion effects. Moreover, categories facing the introduction of new products also might observe reduced effects.

Pauwels, Hanssens and Siddarth (2002) defined a timeframe of price-related promotions effect in three components: immediate (short-term effects), adjustment (transition period from short to long-term effects) and permanent effects (long-term effects). The adjustment period can represent the time when occurs a reversion in the brand's sales or an achievement of a new sales level. This adjustment period can represent a positive or negative effect. Their findings indicate that immediate positive results from price-related promotions are usually not annulled by a negative adjustment effect. This reinforces the reason of why retailers are interested in price-related promotions. Moreover, a lack of permanent effects (long-term) of price-related promotion in sales was observed.

Finally, Ataman, Mela and Heerde (2010) using a five years of weekly data across 25 categories and brands sold in the four largest chains in France reached that price-off promotions affect negatively the sales volume in the long run. These authors conclude that

price-off promotion is an important tool to generate sales bump in the short-term but its long-term results have adverse effects. Regular price-elasticity is decreased by price promotions.

#### 2.4. Related marketing literature review

As shown in previous sections, many authors addressed their studies to the marketing variables effects on sales or companies' financial results. In the course of time studies was fitting together building the literature linked to this marketing study. Then, it is important to understand how this study fits and aggregates to the current literature. In order to promote such studies connection it was developed a table containing the most relevant publications regarding marketing variables effects.

The publications' selection considered the studies encompassing the effects of the marketing variables on means to promote changes on sales. Even publications that did not cover price and sales promotion effects, objective of this study, were considered.

Table 1 – Related marketing literature review

<i>Author</i>	<i>Market</i>	<i>Region comparison</i>	<i>Retailing Formats</i>	<i>Effect of</i>					<i>Data Used</i>	<i>Modeling Approach</i>	<i>Main Findings</i>
				<i>Promotion</i>	<i>Price</i>	<i>Product</i>	<i>Place</i>	<i>Effect on</i>			
Dodds, Monroe & Grewal (1991)	Developed		-	✓	✓		✓	Perceived Quality	SKU level	ANOVA	Price has a positive impact on perceived quality and negative on perceived value and willingness to buy. On the other hand, brand and store information positively affect all the three characteristics.
Jedidi, Mela & Gupta (1999)	Developed		Medium size market	✓	✓			Choice and quantity	Brand level	VPM	Promotion has a negative impact on brand equity in the long-term. Price promotion elasticity shown to have higher effects than regular price elasticities in the long-term. The great part of price cut effect is related to consumers' brand choice decision in the short-term. Promotion effects on sales are negative in the long-term, resulting in around two-fifths the magnitude of the positive short-term effects.
Foekens, Leeflang & Wittink (1998)	Developed		Small, medium and large store	✓				Brand Sales	Store level	VPM	Magnitude and timing of past promotions affect the current promotion results (elasticity). The dynamic model results offer more valid insight into the net incremental sales from promotions than static models do.
Dekimpe & Hanssens (1999)	Developed		Supermarket	✓				Brand and category sales	Brand level	VAR	Price promotions have a temporary effect on brand's and market's sales level. Only the highly concentrated market showed evidences of the price promotion effects, with relative low persistence. Market leader tend to have the largest immediate effect of price promotions. Private-label brands can expand the market and enhance national brands performance.

Bronnenberg, Mahajan & Wanhonacker (2000)	Developed	Grocery	✓	✓	Market-Share	Brand level	VAR	Mature markets are less likely to show permanent effects of marketing actions than emerging markets. Changes in market share or distribution during the early life of a new category result in larger long-term changes in market share and distribution. Price has a greater influence on market share when the category gets mature. Late entrants shall consider to regenerate or redefine a category in order to succeed.
Dekimpe, Steenkamp, Hanssens & Nijs (2001)	Developed	Supermarket	✓		Category demand	Market level	VARX	Price promotion elasticity reached an average of 2.21. The effect dissipates over a time period lasting approximately 10 weeks. The long-term effect is essentially zero. A less oligopolistic market results in a reduced effectiveness of price promotions. Categories experiencing the introduction of new products have reduced price promotion effects.
Pauwels, Hanssens & Siddarth (2002)	Developed	Supermarket	✓		Incidence, Choice and quantity	Brand level	VAR	Absence of permanent sales promotion effect. Price promotions elasticities resulted in positive effects in the short-term. Price promotion effect on immediate and adjustment time is positive on average. The average elasticity of category incidence, brand choice and purchase quantity are 3.83, 2.57, and 0.24 for yogurt and 4.92, 0.83, and 1.67 for soup. Promotional effects are short-lived, being 2 weeks on average and 8 weeks at most. Price promotion offers temporary benefits for established brands.
Nevo & Wolfram (2002)	Developed	Supermarkets in metropolitan and rural areas	✓	✓	Brand Sales	Brand level	VAR	Coupons have a positive effect on current sales, suggesting that coupons are used to induce repurchase.

Pauwels (2004)	Developed	-	✓	✓	✓	Brand Sales	Brand level	VAR	Customer response is not directly vinculated to product-line extensions, price, feature and advertising. Sales effect is five times greater and longer than customer response. This difference is attributed to companies' inertia. Price and Feature have the inertia behaviour while advertising and product-line extensions enhance customer response.
Srinivasan, Pauwels, Hanssens & Dekimpe (2004)	Developed	Supermarket	✓			Brand sales, margins and revenue	SKU level	VAR	Price promotion does not have permanent monetary effects. Positive effects of price promotions were observed on manufacturers revenue, however on retailers those effects are mixed. Brands with frequent and shallow promotion demonstrated higher revenue elasticity for retailers . Categories with low degree of brand ploriferation also showed high elasticities on retailers' revenue.
Steenkamp, Dekimpe, Hanssens and Nijs (2005)	Developed	Supermarket	✓			Brand Sales	Brand level	VAR	Players price-promotion and advertising reaction is passive. In case of reaction, players choose the same marketing instrument. Firms which decide to retaliate usually take ineffective instruments. The reaction of reducing promotion resulted in missing sales opportunity. Reactions are stronger in the short-term than in the long-term.
Steiner, Brezger & Belitz (2007)	Developed	Chain store	✓			Brand Sales	Brand level	AMSE	A greater accuracy of price response funcations can be reached using a semiparametric model embedded in a Bayesian framework.

Ataman, Mela and Van Heerde (2008)	Developed	21 different chain stores	✓	✓	✓	✓	Brand Sales	Brand level	DLM	Price, advertising and discounting have a respectively market effect of 5%, 2% and 2%. Distribution relative effectiveness is 54% over the other variables, representing a key factor to market success. Except discount, all the other marketing variables have a positive total impact on sales. Discounts boost sales in the short-term but has a negative impact in the long-term.
Ataman, Heerde and Mela (2010)	Developed	4 Largest French Chains	✓	✓	✓	✓	Brand Sales	SKU level	DLM	All characteristics of marketing mix resulted in a positive short-term return. Discounts generated a sales boost in the short-term but an adverse effects in the long-term. Product and distribution have a larger effect on sales over the long run than discounting and advertising. Distribution has the fastest feedback performance while product has the lowest.
Farris and Wilbur (2014)	Developed	-				✓	Market-Share	SKU level	CPM	Eighty-six percent of product categories demonstrate a relationship between market-share and distribution to be convex and increasing at SKU level. This convexity is greater in categories with higher revenues and market-share.
Kumar, Sunder and Sharma (2015)	Emerging	Cosmetics, modern and general stores, grocers, Paan-plus and chemists	✓	✓	✓	✓	Brand Sales / Different Channels	Brand level	PMM	Managers in emerging markets shall consider store format level distribution elasticities. There are store formats that are more effective for a certain type of products than others. Price and advertising elasticities can vary for the same brand.



---

Venkatesan, Farris, Guissoni and Neves (2015)	Emerging		Small and Large supermarkets	✓	✓	✓	✓	SKU Sales / Different Channels	SKU level	VAR	Structural differences in full and self-service channels cause differences in the responses to some of the manufacturer's marketing mix elements. Package size variety, price and merchandising have a greater long-term effect on sales in self-service than in full-service channels.
This study	Emerging	✓		✓	✓		✓	SKU Sales / Different Channels & Regions	SKU level	VAR	

---

Notes: VPM = varying parameter model, VAR = vector autoregressive model, DLM = dynamic linear model, SE = system of equations, PM = Parsimonius Multiplicative Model, AMSE = Average Mean Squared Sales Prediction Error, and COM = Common Parameters Model.

Source: Author (2016)

Analyzing the table above, it is possible to infer the evolution of the marketing studies. From the nineties to two thousand and seven, authors focused their studies to the sales promotion effects. These studies began analyzing data from smaller stores, in the nineties, and moved to supermarkets and chain stores. Not surprisingly, all of them concentrated attention to developed economies, mainly United States. By this moment, emerging economies did not represent a great relevance in the retailing scenario.

These studies were probably being focused on sales promotion and developed economies due to the retailing market scenario. The retailing market in developed economies was getting mature during nineties and an increasing competition was being implemented. Thus, sales promotion might have become a strategic weapon to boost sales and defend market-share in that moment.

Ataman et al. (2010) developed a study analyzing the effect of all marketing variables on brand sales. Ataman et al. (2010) followed the trend of previous authors, focusing his study on a developed economy. However, in this time emerging markets were getting relevant in the retailing market and authors revealed the need to better understand the marketing variables effect on this new environment. Based on that, authors such as Kumar et al. (2015) and Venkatesan et al. (2015) developed studies considering this new scenario.

Considering the presented literature, this study will contribute to the academy providing insights of sensitivity and effects of short and long-term of price and in-store promotions in emerging markets. Indeed, some characteristics of price-related promotions effect in emerging markets and developed economies are potentially distinct (Bronnenberg, Mahajan & Vanhonacke, 2000).

Moreover, this study provides a comparison of the effect of price and in-store promotion in the Brazilian northeast and southeast market. This can represent a valuable contribution to the literature. Sheth (2011) informed that emerging markets are heterogeneous, having local and fragmented markets. In this way, a strategy to explore an emerging market shall reach the city level, aiming to identify opportunities with less competition (Atsmon, Child, Dobbs & Narasimhan, 2012).

## 2.5. Marketing researches in emerging markets

The use of the term emerging markets has proliferated in the last years because of the globalization trend. This study considers the World Bank (2014) classification for defining emerging markets. The less complex usage and the focus on available monetary resources in a country make the World Bank classification the most relevant to the marketing scenario (Burgess & Steenkamp, 2006). The monetary resources available can be related to consumers purchase power and then provide insights about spending per household in a country.

Indeed, globalization is one the most relevant challenges for companies today. A scenario of increasing competition is being drawn. Companies even deciding to keep operations in its own market will still face increased competition, from local and foreigners (Burgess & Steenkamp, 2006). The globalization increase summed up with developed markets saturation is making consumer goods manufacturers to start diverting their focus to the emerging markets (Kumar, Sunder & Sharma, 2015).

Considering the competition scenario, emerging markets gain importance because of its growth rates two or three times higher than developed nations. From 2008 to 2012, emerging markets growth rate has been 6% or over, while developed countries such as: United States, Europe and Japan, faced growth rates less than 2% on average (Hale, 2012). In 1995 emerging markets used to represent 18% of global GDP (gross domestic product) and in 2012 they collectively account for 36% (Hale, 2012). Estimative shows that in 2035 the gross domestic product of emerging markets will permanently overtake that of all developed markets (Wilson and Purushothaman, 2003).

### 2.5.1. Emerging markets characteristics in the marketing context

Emerging markets shall not be overlooked in the marketing literature. However, most studies were conducted to developed countries. Today it is crucial for the field of marketing to conduct more studies in the so called emerging markets (Burgess & Steenkamp, 2006). Once emerging markets start to evolve from the periphery to the core of marketing practice, a better understanding of their unique characteristics and a revaluation of the current marketing practices becomes necessary (Sheth, 2011).

Sheth (2011) introduced that a relevant part of emerging markets are highly local and governed by socio-political institutions. These markets also have a lack of infrastructure and suffer from scarce resources. Unbranded products and services have a greater relevance because buy decision is more about make versus buy instead of what brand to buy. Hence, Sheth (2011) identified five dimensions which emerging markets differ from developed economies. These dimensions are: Inadequate infrastructure, Market heterogeneity, Sociopolitical governance, Unbranded competition, and Chronic shortage of resources.

## 2.6. Retailing in emerging markets

Emerging markets will account to half of all retailing sales by 2018 (Euromonitor, 2014d). Emerging markets are gaining representativeness in the retailing market thanks to the strong growth of China, in particular. Additionally, countries such as Brazil, Russia, India, Indonesia, Nigeria and Vietnam also presented double-digit growth in consequence of their middle class population increase and rapid urbanisation.

The middle class expansion and infrastructure improvement will keep on propelling retailing business in emerging markets (Euromonitor, 2014d). More specifically, the improved infrastructure brought better conditions to retailers and their suppliers. This movement turned those markets more attractive to international retailers. Consequently, local grocery retailers to defend their position and face the increase competition had to boost expansion and development (Euromonitor, 2014d).

The mandatory part of retailers in emerging markets is unorganized. This provides a greater complexity to marketing mix. Developed markets are dominated by large retailers, such as Wal-Mart who represent an organized retail. Organized retail sector corresponds to retailers which encompass a great number of outlets, large stores and product range (Kumar, Sunder & Sharma, 2015). On the other hand, unorganized retailer is the one who run the business locally by the owner, lacking techniques and accounting pattern (Sarma, 2005).

The complexity behind the multi-channel characteristic is the potential different effects of marketing variables on sales. Indeed, a previous study developed in the Brazilian market

demonstrated that store formats present distinct marketing variables effect is a reality (Venkatesan et al., 2015).

## 2.7. Retail formats in emerging markets

Multi-channel marketing can be defined by the companies' offers of products and services in different store formats (Levy & Weitz, 2009). Taking into consideration that consumers consider different channels to browse and purchase products, the multi-channel strategy gains greater relevance (Wilson, Street & Bruce, 2008). In this context, companies shall adequately understand the aspects of each channel in order to fine-tune the channel strategy to enhance the customer value (Neslin et al., 2006).

The consumer behaviour among the different store formats can be understood by the consumer's purchase objective such as immediate consumption, specific needs, repositioning and stock-up. Indeed, larger stores (supermarkets and hypermarkets) have higher level of unplanned purchases (Bell, Corsten & Knox, 2011).

The retailing formats in an emerging market can be summarized in two categories: chain self-service (CS) and traditional full-service stores (TF) (Venkatesan et al., 2015). The following figure illustrates both store formats in Brazil.

Figure 1 – Traditional full-service (left side) and Chain self-service (right side)



Source: Cabral (2015) & ClickPB (2013)

As can be seen in the figure above, self-service stores correspond to great markets commonly owned by corporate groups. These stores hold larger shelf-space and product variety. Examples

of self-service stores are: Wal-Mart, Casino and Carrefour. On the other hand, traditional full-service stores represent smaller groceries counting on limited displays and shelf as well as inventory space (Venkatesan et al., 2015).

Traditional groceries are the predominant retailing format in emerging markets (Lenartowicz & Balasubramanian, 2009). Indeed, there are more than two million traditional full-service stores in Mexico, Colombia and Brazil (Diaz, Lacayo & Salcedo, 2007). Despite the apparent predominance of traditional full-service stores, some emerging economies are presenting an increasing relevance of the self-service format. Three different distribution concentration perspectives can be observed: Predominantly traditional, in transition and predominantly modern (CS). India, Indonesia, Philippines and Argentina, for instance, have a great predominance of traditional stores while Russia, China and South Africa are predominant self-service (Diaz, Magni & Poh, 2012).

Factors such as infrastructure and consumers economic power drive the disparity between the developed and emerging economies retailing distribution format. A better infrastructure will contribute to the retailing supply side and then favor the development of self-service channels (Euromonitor, 2014d). Consumers' economic power is correlated to the percentage of car usage. The emergence of a middle class leads a growth in car use that positively influences the penetration of self-service stores. Usually, self-service stores are located in farer places in comparison to traditional stores (Euromonitor, 2014d). Notwithstanding, TF stores are even placed in the same block of consumers' residence serving an area with low economic power and density in which a great retailing store would not be economically viable (Diaz, Lacayo & Salcedo, 2007).

Once stated that TF stores are predominant in emerging markets, it is relevant to understand the marketing differences between CS and TF stores. Nevertheless, CS stores shall also be carefully comprehended due to its increasing presence in emerging markets. Brazilian retailing sales, for example, reached equal distribution between TF and CS stores in 2011 (Diaz, Magni & Poh, 2012).

### 2.7.1. Characteristics of self-service (CS) and traditional full-service (TF) stores

Limited shelf space is a reality in TF stores. This may have an important impact on the consumer's capability to purchase a specific product. In comparison to developed economies, emerging markets have lower average distribution levels of popular SKUs. Shelf availability directly impact brand's market share. Then, manufacturers to incentive retails to stock their products offer better conditions and promotions (Kumar, Shah & Zhao, 2015).

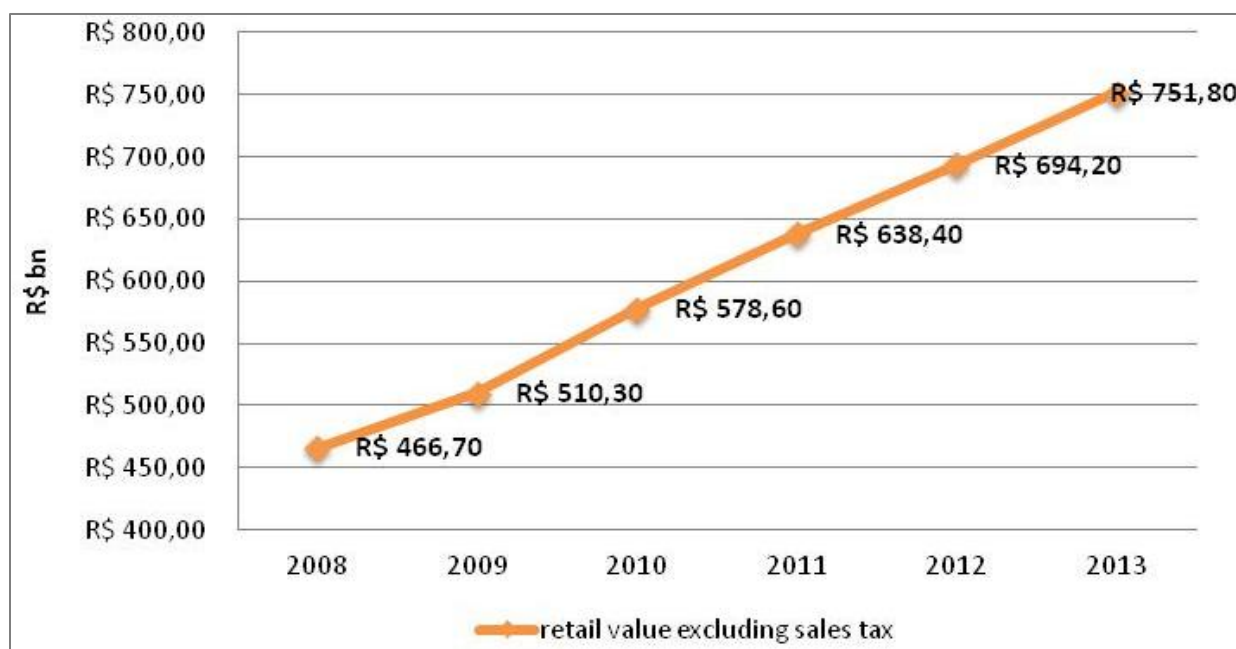
In consequence of the reduced brands availability in TF stores, lower in-store brand competition is expected in comparison to CS stores where consumers have a greater product variety (Chernev, 2003). Not only product variety but also visibility is a challenge in TF stores (Diaz, Lacayo & Salcedo, 2007). Consumers in CS stores can easily compare products and prices in shelves making them more price and promotion sensitive (Venkatesan et al., 2015). In addition, no influence by clerks is observed in CS stores. Conversely, clerks in TF stores have a closer relationship to customers assisting them to find specific shelves (Chandon et al., 2009). Despite these discrepancies between CS and TF stores, price sensitivity might not be completely distinct (Kumar, Shah & Zhao, 2015).

At last, Traditional Full-service stores have more flexibility in changing their product assortment. Consequently, manufacturers' promotions hold a greater influence in TF buyers when deciding whether to accept a new product in their assortment (Montgomery 1975, Rao & McLaughlin 1989, Collins-Dodd & Louviere 1999, Klink & Smith 2001; Kaufman, Jayachandran & Rose 2006; Völckner & Sattler 2006).

### 2.8. Brazilian context

Brazil retailing sales demonstrates a continuous growth since 2008, as shown in the following graph. Average growth rate accounts 10% per year. In 2013 Brazil demonstrated a retailing sales growth of 8.3% in comparison to 2012 sales. This increase was driven by internet retailing and drugstores/parapharmacies, being a consequence of population's consumption to remain high (Euromonitor, 2014f).

Figure 2 – Brazil Retailing Sales



Source: Euromonitor (2014g)

Brazil slipped into recession in 2014 and will face challenges to keep its previous growth rate. Despite all difficulties Brazil is expected to reach growth of real GDP of 1.4%, after gains of 2.5% in 2013 (Euromonitor, 2014h).

In order to analyze the Brazilian marketing environment and its impact in retailing, the Sheth (2011) five dimensions will be used.

### 2.8.1. Market heterogeneity

Brazil is one of the biggest countries in the world, being placed in the fifth position. Its territory size corresponds to around 8.5 kilometres squared, being divided in twenty six states.

The Brazilian size generates opportunity for distinctions among regions to emerge. Southern region, for example, where is home of both São Paulo and Rio de Janeiro, enjoyed the highest spending per household in 2013, US\$26,739. On the other hand, Northeast and North reached the lowest spending per household in 2013, being respectively US\$14,974 and US\$17,364 (Euromonitor, 2014f). Such contrasts motivate the development of researches to properly understand how this can impact business strategies, mainly in the marketing field.



The reduced GDP per capita in the northern region results in less income available after purchasing basic goods (Euromonitor, 2007). Brazil's São Paulo state has a GDP larger than Argentina's. The consequence is a greater focus in this market, resulting in a brutal competition and thin retail margins.

Emerging markets growth is associated with emergence of internal markets (Renard, 2009). The consequence is the increase of the "middle class" with resources and desire for consumption (Fioratti, 2006). The Brazilian economy growth faced an income re-distribution instead of concentration. The result was a 45% reduction in people living below the poverty level from 2003 to 2009 and the emergence of a "new middle class" (Neri, 2010). Once the "new middle class" emerged, it required a repositioning of business in accordance to the growing interest and consumption of categories not previously consumed (Souza & Lamounier, 2010).

Kamakura & Mazzon (2013) developed a study in Brazil to check how socioeconomic status can affect consumption. They identified that consumption can be affected by a budget effect and changes in consumption priorities. However, differences in consumption priorities showed to be the major factor. The consequence is a concentration of expenditures in some product categories across socioeconomic strata. For instance, essential categories such as transportation, sugar and fruits is less concentrated. On the other hand, categories such as dairy, bakery and beverage is more concentrated. This evidence recommends that brands should avoid launching premium brands because this would narrow customer targets, impacting in a coverage lack for a great part of the market. Hence, the decision for a product to encompass middle and lower socioeconomic strata that is probably more price-sensitive is a better strategy.

### 2.8.2. Socio-political governance

The Brazilian government never imposed any regulation to the retailing market. As the market was opened, global retailing chains installed in the country. The international competitive scenario created a natural selection, which only the most efficient and competent retailing chains survived (Gouvea de Souza, 2009). The lack of regulation corresponds to a positive factor to analyze the emerging market retailing characteristics.

A part of the positive perspectives of the country, Brazil holds the worst relation of taxes imposed to Human Development Indicator in the world<sup>3</sup>. This condition creates a completely dissatisfaction environment by the population stimulating them to evade taxes. Brazil is the second country in the world with the higher tax evasion index<sup>4</sup>. Indeed, the informal economy is growing each year in the country<sup>5</sup>.

In the retailing scenario, the taxes situation of Brazil propels the traditional full-service (TF) stores to avoid paying taxes and then become more competitive due to its lower costs (Diaz, Lacayo & Salcedo, 2007). Hence, one can infer that prices in TF stores might not be so different in comparison to CS stores, which have greater bargain power due to its size.

### 2.8.3. Unbranded competition

Once friends and family recommendations have positive effects, word of mouth plays a key factor in consumers purchase decision in emerging markets (Atsmon, Child, Dobbs & Narasimhan, 2012). Local branding has an initial advantage. In this context, companies which kept local branding presented better performance (De abreu filho, Calicchio & Lunardini, 2003). Global brands to succeed need to reach visibility and accelerate word of mouth network effects (Atsmon, Child, Dobbs & Narasimhan, 2012).

Brazil is facing an income re-distribution and then a “new middle class” is emerging (Neri, Souza & Lamounier, 2010). This condition generates a window of opportunity because consumers moving from rural areas to cities are highly receptive to new ideas and ways of living (Atsmon, Child, Dobbs & Narasimhan, 2012). Hence, promotion efforts could be more effective. This information highlights an increasing attention to branding development.

Additionally, some categories such as beverages, bakery and personal care have its consumption more concentrated in certain socioeconomic groups (Kamakura & Mazzon, 2013). Brands shall

---

<sup>3</sup> Exame (2014). “Brasil tem o pior retorno de impostos para populacao”, available at: <http://exame.abril.com.br/economia/noticias/brasil-tem-pior-retorno-de-impostos-para-populacao-diz-ibpt>.

<sup>4</sup> Tax Justice Network (2011), “The cost of tax abuse: A briefing paper on the cost of tax evasion worldwide”, available at: [http://www.tackletaxhavens.com/Cost\\_of\\_Tax\\_Abuse\\_TJN%20Research\\_23rd\\_Nov\\_2011.pdf](http://www.tackletaxhavens.com/Cost_of_Tax_Abuse_TJN%20Research_23rd_Nov_2011.pdf).

<sup>5</sup> McKinsey (2012), “Tax evasion a way of life in Brazil”, available at: [http://www.mckinsey.com/insights/mgi/in\\_the\\_news/tax\\_evasion\\_a\\_way\\_of\\_life\\_in\\_brazil](http://www.mckinsey.com/insights/mgi/in_the_news/tax_evasion_a_way_of_life_in_brazil).

encompass middle and lower classes that are probably more price-sensitive and correspond to great part of Brazilian market, 80% (Banco Central do Brasil, 2012).

#### 2.8.4. Chronic Shortage

According to survey made in 2013 by Manpower, Brazil ranks the second place in the world's nation under acute skilled workers shortage. Particularly, markets such as chemical, engineering, oil and information technology have a deep lack of professionals. In order to attend the demand, companies are relying on foreigner workers (Euromonitor, 2014a). Indeed skilled workers offer a greater productiveness allowing companies to reach a greater efficiency (Abel, Bernanke & Croushore, 1952).

On the other hand, Brazil possesses wealth natural resources such as water, oil and gas. This condition places the country on the right direction for a sustainable economic growth (Reynoso & Levy, 2014). In addition, Brazil has a competitive advantage in consequence of its broad fertile land, mineral resources and low-labour costs (Euromonitor, 2014b).

#### 2.8.5. Inadequate infrastructure

Brazil's investment in infrastructure over the past decade did not meet country's economic growth. The impact was a limited economic acceleration which could have been greater (Reynoso & Levy, 2014).

The poor infrastructure condition in some Brazilian regions offers difficulties to development of self-service stores. As the CS stores are normally supermarkets or hypermarkets, the poor infrastructure jeopardize the supply side of this retailing business (Euromonitor, 2014d). Notwithstanding, infrastructure also can impact demand conditions once unsatisfactory transportation results in lower consumers outreach, favouring local and closer TF stores (Lenartowicz & Balasubramanian, 2009).

### 2.9. Hypothesis

In this section, all hypotheses tested in this study will be presented. In order to develop each hypothesis, it was considered all literature encompassed in the literature review. Previously presenting each hypothesis it will be: first, demonstrated all characteristics of Brazilian consumer

style and demography; second, explained the type of consumer of juice; and third, detailed the rationale used to link the marketing concepts with demographic and economic characteristics of the Brazilian southeast and northeast region.

### 2.9.1. Brazilian consumer style

In a social scale from A to E<sup>6</sup>, the classes D and E correspond to 32.3% and 41%, respectively, of Brazilian population (Euromonitor, 2014e). In other words, the lower social classes dominate the Brazilian population. However, an increase in the average spending per household is occurring, being consequence of the new Brazilian middle class emergence, mainly in the northern region (Souza & Lamouner, 2010). Although, the upper classes have the higher income, the middle class represents the great part of the Brazilian consumption (Euromonitor, 2014c).

Brazilian consumer expenditure increased 5.2% from 2008 to 2013, reaching 1.4 trillion dollars in 2013. This growth was supported by the increase in population income and credit availability (Euromonitor, 2014e). Around 50% of all credit cards belong to middle class population, which curiously are likely to purchase less lower-priced products than the upper classes. Additionally, increases on beverage consumption are being driven by the middle class. The beverage consumer spending grew almost 100% from 2000 to 2012 (Euromonitor, 2014c).

### 2.9.2. Brazilian southeast and northeast characteristics

Brazilian northeast and southeast region presents great disparities between them. The southeast region holds the greatest spending per household, US\$ 26,739, while the northeast region the lowest, US\$ 14,974 (Euromonitor, 2014f). Additionally, the southeast region has the highest urbanization rate: 92.95%. On the other hand, the northeast region enjoys the lowest urbanization rate: 73.13% (IBGE, 2010).

Despite these controversial indicators, the northeast region has the second biggest population with around 54 million people, just behind the southeast region with about 82 million (IBGE, 2011). Brazilian total population surpassed 195 million people in 2011 (IBGE, 2011). At last,

---

<sup>6</sup> Social Class A: Individuals with gross income upper than 200% of Brazilian average; Social Class B: Gross income between 200% and 150% of Brazilian average; Social Class C: Gross income between 150% and 100% of Brazilian average; Social Class D: Gross income between 50% and 100% of Brazilian average; and Social class E: Gross income less than 50% of Brazilian average.

both consumer markets are representative. The southeast total expenditure in 2013 was US\$ 723 billion, being the first consumer market. Then, the northeast market reached the third place after Brazilian south market (Euromonitor, 2014e).

### 2.9.3. Category consumer detailing

More specifically, discussing each category considered in this study; the juice market has its main consumer the upper social classes despite the increasing consumption by middle and low classes. Middle and low classes are promoting the growth of this category. Furthermore, the consumption boost is also a reflection of juice's healthy appeal when compared to the great popular drink: soda (Estadão, 2013). An article published by Veja (2014) introduced that orange juice, for example, could have a greater consumption if its price were lower. In accordance to the article the price limits the consumption although the convenience of the juice in box is higher than making it at home.

### 2.9.4. Proposed hypothesis

Sheth (2011) raised five dimensions about differences between emerging markets and developed economies. One of these dimensions is heterogeneity. Brazil shows to be a very heterogeneous country in consequence of its regions' urbanization rate, population and spending per household. In this context, the southeast region leads Brazil's indicators of urbanization rate and spending per household while the northeast region has the lowest numbers, as described in section 2.9.2.

As a result of the lower spending per household, the northeast population has less income available after purchasing basic products (Euromonitor, 2007). Price elasticity of demand is expected to be higher in regions with budget constraints (Burgess & Steenkamp, 2006). Indeed, the middle and lower socioeconomic strata may be more price-sensitive (Kamakura & Mazzon, 2013). Atacarejos, hybrid format of cash and carry and hypermarket, in Brazil are more popular among low income consumers in consequence of the low price offers (Euromonitor, 2014d). Then:

*H<sub>1a</sub>: In the chain self-service stores, price sensitivity is higher in the northeast market than in the southeast.*

And,

*H<sub>1b</sub>: In the chain full-service stores, price sensitivity is higher in the northeast market than in the southeast.*

The level of unplanned purchases and shopping trip objective vary across retail formats (Bell, Corsten, & Knox, 2011). More specifically, it can vary from a self-service (big stores with large variety of assortments and price promotions) to both neighbourhood and full-service stores (smaller stores with limited assortment and higher level of price). In emerging markets, shoppers may be motivated to shop groceries in both self-service and full-service formats, once there are a variety of channels offering different benefits. Full service stores are more convenient located in the cities, where infrastructure is better, making it easier for consumers to have access to these stores; products are often cheaper in the big self-service stores due to its high-volume sales environment. This evidence is clear when looking at Supercenter stores and every-day-low-price retailers such as Wal-Mart (Singh, Hansen & Blattberg, 2006; Cleeren et al., 2010). These stores offer a depth assortment and promotions, with the “one-stop-shopping” concept, including a variety of products and categories that cannot be found at smaller neighbourhood supermarkets and full-service stores.

Additionally, as TF stores have reduced brands availability, a lower in-store brand competition is expected in comparison to CS stores (Chernev, 2003). The greater product availability might bring higher price sensitiveness to CS stores consumers. Indeed, consumers can easily compare price among the brands range. Thus:

*H<sub>2</sub>: In both regions, northeast and southeast, price sensitivity is higher in chain self-service than in traditional full-service stores.*

The juice category faced the greatest consumption increase in the last years. The increase was mainly motivated by the “new middle class” consumption (Estadão, 2013). This “new middle class” emergence is the current scenario of the Brazilian northeast market, offering good opportunities for companies (Souza & Lamounier, 2010; Atsmon, Child, Dobbs & Narasimhan, 2012).

Moreover, Brazilian consumer spending is a function of socioeconomic strata priorities (Kamakura & Mazzon, 2013). In other words, social classes focus their consumption in a specific range of products, not expanding the category range in consequence of available income.

Based on that, companies are repositioning their brands to the growing interest of product categories not previously consumed by this new group of people (Souza & Lamounier, 2010). Indeed, people tend to consume the same one hundred fifty products, corresponding to 85% of their needs (Schneider and Hall, 2011). Consequently, in-store promotion of categories such as juice has the important goal to increase brand awareness, mainly for the new middle class consumers.

In addition, in-store displays that exposure products beyond its category-related shelves can provide support to increase visual attention to influence consumer behavior at the point of purchase (Chandon et al., 2009). However, previous research found that in-store marketing activity could influence consumers only to a certain extent, because not every in-store attention drives choice (Chandon et al., 2009). Then, in-store displays that exposure product on discounts could drive choice because of the price promotion attractiveness besides visual attention.

On the other hand, the southeast market is already mature, being more competitive. In a scenario of great competitiveness, in-store promotion and price are a question of survival (Blattberg & Neslin, 1990). Notwithstanding, companies shall consider that a sales promotion established by a company can be rapidly matched by its players (Blattberg & Neslin, 1990). In addition, the regular use of sales promotion can decrease in brand loyalty and quality perception, increase in price sensitivity, and increase in brand switching (Keller, 1998; Gedenk & Neslin, 2000; DelVecchio, Henard & Freling, 2006; Ataman et al., 2010).

*H<sub>3a</sub>: In the traditional full-service stores, the effect on sales of an increase in the availability of stores with sales promotions for products on temporary displays is higher in the northeast market than in the southeast*

And,

*H<sub>3b</sub>: In the chain self-service stores, the effect on sales of an increase in the availability of stores with sales promotions for products on temporary displays is higher in the northeast market than in the southeast.*

The northeast market is under evolution (Nielsen, 2014a). Consumers from the “new middle class” are now getting accesses to different product categories such as the one considered in this study. Sales promotion and price can stimulate a consumer to purchase a brand for the first time (Casielles & Alvarez, 2005; Ehrenberg, Scriven & Barnard, 1997), and then these marketing variables can be a powerful tool to increase awareness and expand sales in the northeast market. Furthermore, Bronnenberg, Mahajan & Wanhonacker (2000) informed that changes in brands’ market-share in new categories can achieve larger persistent effects.

As consumers in the southeast region have a greater spending per household in comparison to the northeast (Euromonitor, 2014f), we can infer that these consumers had previous access to the category under study. In addition, the greater competitiveness observed in the southeast lead brands to broadly use promotions and price reductions (Blattberg & Neslin, 1990). Ultimately, as previously stated, the regular use of sales promotion can decrease brand loyalty and quality perception, increase price sensitivity, and increase brand switching (Keller, 1998; Gedenk & Neslin, 2000; DelVecchio, Henard & Freling, 2006; Ataman et al., 2010).

Considering the above characteristics and the evidences that there are no convergent findings about sales promotion long-term effects on sales volume, if it is positive or negative (Keane, 1997; Foekens, Leeftang & Wittink, 1998; Jedidi, Mela & Gupta, 1999; Nijs, Dekimpe, Steenkamp & Hanssens, 2001; Ataman, Mela & Heerde, 2010), then:

*H<sub>4a</sub>: In the traditional full-service stores, the persistency of price effect on sales is higher in the northeast market than in the southeast.*

*H<sub>4b</sub>: In the chain self-service stores, the persistency of price effect on sales is higher in the northeast market than in the southeast.*

And,



*H<sub>5a</sub>: In the traditional full-service stores, the persistency of an increase in the availability of stores with sales promotions for products on temporary displays effect on sales is higher in the northeast market than in the southeast.*

*H<sub>5b</sub>: In the chain self-service stores, the persistency of an increase in the availability of stores with sales promotions for products on temporary displays effect on sales is higher in the northeast market than in the southeast.*

### 3. METHODOLOGY

This chapter addresses the scientific methodology that allows data analysis to answer the proposal problematic. It is essential that the methodology clearly transmits the knowledge and adequately offers conditions to the study results (Godoi & Balsini, 2006). Notwithstanding, methods need to assist authors providing orientation and technical insights to develop the research, mainly data capture, process and validation (Gil, 2006).

To answer the research question and to contribute with the current literature, this study employs a quantitative approach to work with the retailing sales variables and then integrate them to generate a single econometric model. Additionally, this study contemplates characteristics of a descriptive research because it aims to identify the relationship among marketing variables.

A descriptive research permits a better data comprehension identifying trends and atypical variations by tables and graphics (Faveiro et al., 2009). This type of research is developed through a measurement analysis of events from statistical methods (Hair et al., 2005). The variables relation is identified through statistics analysis from impulse in price variations. Thus, this research method is defined as descriptive quantitative.

This study aims to verify the effect of price and in-store promotion on sales in different store formats and regions. Thus, the quantitative model must be able to determine the price and promotion sensitivity of each brand on sales. In other words, the model must be capable to verify the variance in the product's sales volume due to changes in its price and in-store promotion. Moreover, the modelling shall be able to identify the effect on sales in the short (immediate effect) and long-term (persistent effect).

#### 3.1. Data

The analysis will be done over a secondary data source. Secondary data is considered any data under analysis to answer a research question which was initially collected for a distinct propose (Vartanian, 2011). The database considered in this study is a scanner data from store audits developed by a relevant survey company, encompassing Brazilian retailing sales to consumers from January 2010 to January 2013.

Brazil corresponds to one of the most relevant emerging markets in the retailing business. In consequence of Brazil's geography size, urbanization rate and income distribution, the country offers great opportunities to observe the heterogeneity an emerging market might have (Euromonitor, 2014d). Regions such as the southeast and northeast present disparities of almost 100% and 22% for household income and urbanization rate respectively (Euromonitor, 2014d). Both aspects have the potential to impact marketing variables effect.

More specifically, the southeast region holds the greatest spending per household, US\$ 26,739, while the northeast region the lowest, US\$ 14,974 (Euromonitor, 2014f). Additionally, the southeast region has the highest urbanization rate: 92.95%. On the other hand, the northeast region enjoys the lowest urbanization rate: 73.13% (IBGE, 2010).

Despite these controversial indicators, the northeast region has the second biggest population with around 54 million people, just behind the southeast region with about 82 million (IBGE, 2011). Brazilian total population surpassed 195 million people in 2011 (IBGE, 2011). At last, both consumer markets are representative. The southeast total expenditure in 2013 was US\$ 723 billion, being the first consumer market. Then, the northeast market reached the third place after Brazilian south market (Euromonitor, 2014e).

Database contains retailing sales information for the beverage category (juice). The beverage segment was selected to perform this study because of its relevance in the retailing market and its distribution characteristics. This segment corresponded to the third largest segment of revenue generating in the Brazilian retailing market in 2013 (Nielsen, 2014). In addition, the beverage segment is commercialized in a wide range of channels and situations, providing access for all type of consumers (Venkatesan et al., 2015).

Among beverage categories, it was selected the juice category. This category was selected because of its market growth and movements. In the last years the juice market faced positive variances. From 2012 to 2013, juice had the greatest market increase, being 11.7% in sales volume (Nielsen, 2014). Moreover, this category demonstrated huge brand movements such as brands entry and exit, and market share (Euromonitor, 2014g; Euromonitor, 2015a, Euromonitor, 2015b). The juice market, for example, faced an entry of six new brands from 2009 to 2014. In addition, the leading brand in the market, Del Valle (Coca-Cola Co.), showed a market share

variance of almost 4,5% in the same period. Those movements are important to generate a good mass of data to observe the effects of marketing variables.

In order to analyze the heterogeneity of the effects of price and in-store promotion in an emerging market, it was chosen the Brazilian northeast and southeast regions. These regions display an interesting opportunity to study the effects of the marketing variables in consequence of their dissimilarities. As described in section 2.9.2, the southeast region has the greater spending per household and urbanization rate while the northeast the lowest. However, the northeast region has a representative contribution in Brazilian consumption, holding the third place among the five great regions (Southeast, northeast, south, middle-west, and north). Southeast holds the first place of total Brazilian expenditure with US\$ 723 billion in 2013 (Euromonitor, 2014e).

The southeast region considered in the database encompasses all cities from São Paulo estate interior and excludes the cities from the great São Paulo, being: São Paulo, Guarulhos, São Bernardo do Campo, Osasco, Santo André, Mauá, Embu, Diadema e Taboão. On the other hand, the northeast region employed accounts with the cities of Ceará, Paraíba, Rio Grande do Norte, Pernambuco, Alagoas, Sergipe and Bahia. These regions together counted with 30.9% of total Brazilian retail sales in 2009. More specifically, the southeast region considered contributed with 16% while the northeast region 14.9%<sup>7</sup>.

### 3.1.1. Data characteristics

The database is at SKU level (Stock keeping Unit), being ideal to handle price and sales promotions studies. In retailing this is the level which many marketing decisions such as price, sales promotion and trade are taken and implemented (Farris & Wilbur, 2014). Moreover, Farris and Wilbur (2014) in their study encompassing market-share and distribution added that a database contemplating data in SKU level can be considered a differential in the literature environment. Normally studies are made in levels above SKU, such as category and brand (Pauwels, 2004; Steiner, 2007).

---

<sup>7</sup> Data from a worldwide renowned audit company in points of sale

Data has monthly sales information for the juice category and for Brazilian southeast and northeast markets. The variables in database correspond to: SKU (Stock Keeping Unit), month, Unit Sales of Leader, Unit Sales of competitor, Relative Unit Price, and In-store promotion. The following table provides detail information about each variable.

Table 2 – Variables detailing

Variable	Type	Description
SKU (Stock Keeping Unit)	Descriptive	Provides detailed information about the SKU sold. Example: Jandaia, glass, cases of 24 units of 8 ounces, nectar/juice
Month	Descriptive	Captures the month in which each SKU was sold
Unit sales of Leader	Numeric	Gives information of sales volume per month per SKU in cases of twenty four units of eight ounces (x1000).
Unit sales of Competitor	Numeric	Gives information of sales volume per month per SKU in cases of twenty four units of eight ounces (x1000).
Relative unit Price	Numeric	Price (to consumers and weighted by ounces) divided by the average price in the relevant category (to consumers and weighted by ounces)
In-Store Promotion (weighted distribution of display promotions)	Numeric	Informs percentage of sales point which had promotional incentives in temporary displays at the purchase moment. Example: if a SKU has 10% WDR Promo in a determined period, this means that the SKU presented promotions to end consumers of 10% in the most important retail stores to the specific category.

Source: Author (2016)

It is relevant to clarify that the promotion data considered in this study is aggregated. No discrimination of the promotion's type in temporary displays used at the moment of purchase is done in the variable In-store Promotion. The variable only indicates the presence or not of promotion from the retailer to the consumers.

Previous developing deep analysis over the database, it is relevant to run basic statistics number. This might provide insights about trends in future results and better approach statistical

modelling construction. Table 3.2 presents an overview of juice market for both Brazilian regions under analysis (southeast and northeast).

Table 3 – Juice database statistics description

Variable	Southeast				Northeast			
	Chain Self-Service (51 SKUs)		Traditional Full-Service (34 SKUs)		Chain Self-Service (46 SKUs)		Traditional Full-Service (43 SKUs)	
	M	SD	M	SD	M	SD	M	SD
Unit Sales of Leader	1857,16	125,95	530,14	53,41	1431,92	159,54	678,56	212,97
In-Store Promotion (weighted distribution of display promotions)	8,08	1,63	1,25	1,04	7,94	11,60	3,77	1,35
Relative Unit Price	137,29	5,62	135,31	2,97	133,84	43,83	137,48	2,97
Unit Sales of Competitor	1066,03	137,97	266,44	42,29	738,48	160,95	452,13	85,43
Unit Sales of Competitor	1030,58	433,09	118,77	34,28	494,39	95,52	386,39	50,20

M: Mean SD: Standard Deviation

Source: Author (2016)

As can be seen in the above table, the southeast and northeast regions show similar pattern of sales and in-store promotion between CS and TF channel (Higher in CS than TF channel). However, the CS channel holds a greater volume of unit sales as well as a higher concentration of in-store promotions.

In addition, the regions demonstrate to have low price difference. Indeed, the relative unit price average for cases of twenty four units of eight ounces in southeast is 137,29 BRL while 133,84 BRL in northeast.

### 3.2. Analysis method

The size expansion of marketing data drove data sets in several directions. Researchers highlight five reasons for that: temporal aggregation, increase of data availability, international data availability, non-traditional measures, and data availability over long time spans (Dekimpe & Hanssens, 2010).

Analyzing the database of this study on this perspective, it is possible to identify some characteristics informed by Dekimpe and Hanssens (2010). First, the database is established temporally in a month level. Second, the database contemplates a wide range of information for each category. Third, the database has information from the Brazilian northeast and southeast market. Hence, the database of this study can be defined as multivariate and temporal. In other words, the database has wide range availability of variables, and is arranged per time periods. A positive aspect is that time series techniques are adaptable to capture dynamic implications of market crises, for example: drastic price variations (Dekimpe & Hanssens, 2010).

As it can be inferred from table 2.1, authors commonly use Vector-Autoregressive models to analyze their marketing databases. Notwithstanding, vector-autoregressive (VAR) model turned to be a research dominant tool to analyze temporal series (Bruggemann, 2004). Indeed, marketing literature recommends the usage of multivariate models such as VAR to analyze temporal series due to its capability of checking marketing variables relationship (Dekimpe & Hanssens, 1995; Pauwels, 2004). Moreover, the main characteristic of the econometric model of Vector-Autoregressive (VAR) is to verify the interconnected variables relationship to generate a model. However, other techniques such as Vector-Autoregressive with error correction (VECM) and dynamic linear models can also be applicable to multivariate models (Vartanian, 2008).

Vector-Autoregressive (VAR) models are better adjusted to establish dynamic interactions between sales and marketing variables than other alternative models (Dekimpe & Hanssens, 1999; Pauwels et al., 2002). Moreover, VAR models are being used to measure long-term effects of marketing actions (Bronnenberg et al., 2000; Dekimpe & Hanssens 1999; Nijs et al., 2001; Pauwels et al., 2002, 2004; Srinivasan et al., 2004).

Previous defining which quantitative model will be used in this study it is necessary to develop database tests. These tests will indicate the best quantitative method to measure the price and in-store promotion sensitivity. First, it is necessary to check the presence of unit roots aiming to certify if the data series is stationary (Ataman, Mela & Heerde, 2010). Second, perform a lag test to verify which model shall better adapt in relation to the number of lags (Pauwels et al., 2002). Finally, check cointegration among variables - if the variables have an equilibrium relationship over time (Hanssens, Parsons & Schultz, 2003).

### 3.2.1. Unit root analysis

Unit root analysis provides basis to define temporal series stationary characteristics. A temporal series is defined stationary when the values fluctuate around the same mean (Makridakis, Wheelwright & Hyndman, 2008). For example, a beverage which sales does not increase or decrease over time.

Based on that, the marketing effects of a sales shock can be affected in case the series holds a unit root, making the shock effect to persist throughout the time (Hanssens, Parsons & Schultz, 2003). Consequently, unit roots shall be removed from the database.

In order to verify the presence of unit root in the data base, it was used the Dickey-Fuller test (DF test). The following tables illustrate the results of the unit root analysis.

Table 4 – Unit root analysis for the Southeast market model

Variable	Southeast Chain Self-Service					Southeast Traditional Full-Service				
	Constant	Trend	ADF	Critical Dickey-Fuller		Constant	Trend	ADF	Critical Dickey-Fuller	
				1%	5%				1%	5%
Sales	No	No	-3,01	-2,58	-1,95	No	No	-2,05	-2,58	-1,95
	Yes	No	-3,74	-3,43	-2,86	Yes	No	-4,25	-3,43	-2,86
	Yes	Yes	-3,83	-3,96	-3,41	Yes	Yes	-4,37	-3,96	-3,41
Price	No	No	2,39	-2,58	-1,95	No	No	-2,54	-2,58	-1,95
	Yes	No	-2,28	-3,43	-2,86	Yes	No	-5,67	-3,43	-2,86
	Yes	Yes	-2,74	-3,96	-3,41	Yes	Yes	-5,67	-3,96	-3,41
Promo	No	No	-11,68	-2,58	-1,95	No	No	-19,84	-2,58	-1,95
	Yes	No	-15,90	-3,43	-2,86	Yes	No	-24,16	-3,43	-2,86
	Yes	Yes	-15,95	-3,96	-3,41	Yes	Yes	-24,38	-3,96	-3,41

Source: Author (2016)



Table 5 – Unit root analysis for the Northeast market model

Variable	Northeast Chain Self-Service					Northeast Traditional Full-Service				
	Constant	Trend	ADF	Critical Dickey-Fuller		Constant	Trend	ADF	Critical Dickey-Fuller	
				1%	5%				1%	5%
Sales	No	No	1,80	-2,58	-1,95	No	No	1,71	-2,58	-1,95
	Yes	No	1,01	-3,43	-2,86	Yes	No	0,49	-3,43	-2,86
	Yes	Yes	1,01	-3,96	-3,41	Yes	Yes	0,41	-3,96	-3,41
Price	No	No	-2,46	-2,58	-1,95	No	No	-0,52	-2,58	-1,95
	Yes	No	-5,07	-3,43	-2,86	Yes	No	-4,83	-3,43	-2,86
	Yes	Yes	-4,99	-3,96	-3,41	Yes	Yes	-4,84	-3,96	-3,41
Promo	No	No	-2,46	-2,58	-1,95	No	No	-9,46	-2,58	-1,95
	Yes	No	-5,07	-3,43	-2,86	Yes	No	-14,15	-3,43	-2,86
	Yes	Yes	-6,53	-3,96	-3,41	Yes	Yes	-14,45	-3,96	-3,41

Source: Author (2016)

As can be observed in the Dickey-Fuller test, unit roots were identified in the dependent variables of price and sales for the Southeast and Northeast market respectively. After applying a constant and a trend in the regression, the unit root in both cases could not be annulled. Based on that, it was applied the forward first difference for all areas and then the condition of stability became acceptable.

### 3.2.2. Lag test

After performing the unit root analysis, it is necessary to define the variables order in the model. The relevance of this test is to assure that the endogenous variable is being properly explained by itself and the other exogenous variables. In order to adjust the order; it is essential to define the number of lags to include in each variable.

The criteria used to define the lag structure were the AIC (*Akaike Information Criterion*) and BIC (*Bayesian Information Criterion*). Discussions related to the best criteria to use when defining the model variables are found in the academy (Burnham & Anderson, 2004; Wang & Liu, 2006). However, as AIC and BIC demonstrate distinct characteristics, it was found favourable to apply these criteria together for selecting the model (Kuha, 2004). The following tables show the results from AIC and BIC criteria.

Table 6 – Lag test for the Southeast market model

lag	Southeast Chain Self-Service		Southeast Traditional Full-Service	
	MBIC	MAIC	MBIC	MAIC
1	3,50e-30*	3,50e-30*	1,70e-31*	1,70e-31*
2	1,58e-29	1,58e-29	1,15e-30	1,15e-30
3	2,07e-29	2,07e-29	3,13e-30	3,13e-30
4	4,95e-29	4,95e-29	7,82e-30	7,82e-30
5	7,99e-29	7,99e-29	1,35e-29	1,35e-29

Source: Author (2016)

Table 7 – Lag test for the Southeast market model

lag	Northeast Chain Self-Service		Northeast Traditional Full-Service	
	MBIC	MAIC	MBIC	MAIC
1	7,48e-31*	7,48e-31*	3,44e-31*	3,44e-31*
2	3,83e-29	3,83e-29	3,03e-30	3,03e-30
3	4,97e-29	4,97e-29	2,55e-27	2,55e-27
4	5,62e-29	5,62e-29	6,16e-30	6,16e-30
5	7,63e-29	7,63e-29	3,10e-29	3,10e-29

Source: Author (2016)

In both regions (Northeast and Southeast), the AIC and BIC results indicate the application of one-period lag to achieve a greater model stability.

### 3.2.3. Cointegration test

The cointegration test specifies whether there is a long-term equilibrium between the dependent variable (endogenous) and the independent variables (exogenous) (Pauwels, Hanssens & Siddarth, 2002). In case a cointegration adjustment is needed, the model to be used is the VECM instead of VAR (Srinivasan, Leszczyc & Bass, 2000). This adjustment corresponds to adapt the variables short-term behaviour in accordance to the long-term ones.

A possible manner to perform a cointegration analysis is through the Johansen (1991) test. This test basically verifies whether the number of eigenvalues is greater than the number of linear equations. If positive, the model presents no cointegration relation among its temporal series.

After applying the Johansen (1991), the following results were achieved:

Table 8 – Cointegration test for the Southeast market model

	Southeast Chain Self-Service				Southeast Traditional Full-Service			
	Eigenvalue	Trace	Critical Value	P-Value	Eigenvalue	Trace	Critical Value	P-Value
Test of rank = 0	0,594	2385,930	1641,540	0,000	0,689	833,80	522,460	0,000
Test of rank = 1	0,577	1280,670	913,000	0,000	0,683	479,720	313,630	0,000
Test of rank = 2	0,167	223,670	204,470	0,000	0,352	131,380	106,600	0,000

Source: Author (2016)

Table 9 – Cointegration test for the Northeast market model

	Northeast Chain Self-Service				Northeast Traditional Full-Service			
	Eigenvalue	Trace	Critical Value	P-Value	Eigenvalue	Trace	Critical Value	P-Value
Test of rank= 0	0,629	1841,870	1237,330	0,000	0,629	1841,870	522,460	0,000
Test of rank= 1	0,542	848,120	607,260	0,000	0,542	848,120	313,630	0,000
Test of rank= 2	0,065	67,320	65,120	0,000	0,065	67,320	106,600	0,000

Source: Author (2016)

The trace value, which corresponds to the sum of the eigenvalues for each model, resulted greater than the critical value for all models. This factor indicates that no cointegration was found. Consequently, no adjustment in the VAR model was realized.

### 3.3. VAR model development

After concluding the unit root, lag and cointegration tests, the VAR model was properly developed. The software STATA® was used to develop the model following the methodology structured by Love and Zicchino (2006) and the emerging market effect method by Venkatesan et. al (2015).

Afterwards, the variables of sales, price and promotion was set in a VAR panel:

$$\begin{bmatrix} \Delta Sales_{hjit} \\ \Delta Price_{hjit} \\ lPromo_{hjit} \end{bmatrix} = \begin{bmatrix} \alpha_{1i} \\ \alpha_{2i} \\ \alpha_{3i} \end{bmatrix} + \begin{bmatrix} \gamma_{1t} \\ \gamma_{2t} \\ \gamma_{3t} \end{bmatrix} + \begin{bmatrix} \beta_{11j} & \beta_{12j} & \beta_{13j} \\ \beta_{21j} & \beta_{22j} & \beta_{23j} \\ \beta_{31j} & \beta_{32j} & \beta_{33j} \end{bmatrix} \times \begin{bmatrix} \Delta Sales_{hjit-1} \\ \Delta Price_{hjit-1} \\ lPromo_{hjit-1} \end{bmatrix} + \begin{bmatrix} d_{11} \\ d_{12} \\ d_{13} \end{bmatrix} \times \\
Seasonality_t + \begin{bmatrix} d_{21} \\ d_{22} \\ d_{23} \end{bmatrix} \times [Competitor1_{hjt-1}] + \begin{bmatrix} d_{31} \\ d_{32} \\ d_{33} \end{bmatrix} \times [Competitor2_{hjt-1}] + \begin{bmatrix} e_{1hjit-1} \\ e_{2hjit-1} \\ e_{3hjit-1} \end{bmatrix} \quad (1)$$

The structure purposed aims to replicate the first stage of Ventakesan et. al (2015) model.  $\Delta Sales_{hjit}$  represents the first difference of unit sales for SKU  $i$  in the channel  $j$  in the month  $t$  for the area  $h$ .  $\Delta Price_{hjit}$  is the first difference of relative price for SKU  $i$  in the channel  $j$  in the month  $t$  for the area  $h$ .  $lPromo_{hjit}$  is the log of the percentage of stores with promotion with extra efforts for SKU  $i$  in the channel  $j$  in the month  $t$  for the area  $h$ . Seasonality is a dummy variable when is winter in the southeast, since the region reaches lower temperatures than the northeast during the same period. Competitors' sales represent the category unit sales for the second largest manufacturer in the area  $h$  in the month  $t$ . Finally, the vector  $\{e_{1hjit-1}, e_{2hjit-1}, e_{3hjit-1}\}$  is a random error normal distributed.

The fixed effects  $\{\alpha_{1i}, \alpha_{2i}, \alpha_{3i}\}$  accommodated the heterogeneity among the SKUs; and the monthly fixed effects  $\{\gamma_{1t}, \gamma_{2t}, \gamma_{3t}\}$  control the seasonality. Unobserved correlation among the variables was accommodated by specifying a common covariance matrix for the errors. The random errors were normally distributed with zero mean and a common covariance matrix  $\Sigma_e$ . The coefficients  $\beta = \{\beta_{11j}, \beta_{12j}, \dots, \beta_{55j}\}$  estimate the lagged, reinforcement and feedback effects among in-store marketing and sales (Ventakesan et al. 2015).

Furthermore, in order to estimate the short and the long-term effects of price and promotion on sales it was applied an impulse-response factor after the estimation of panel VAR. Thus, it was estimated the time it takes for the dependent variable to revert to its mean after being shocked by a price promotion or an extra effort in the point of purchase (Pauwels, Hanssens & Siddarth, 2002).

#### 4. RESULTS

The results from the VAR model developed are demonstrated in the following tables grouped by store formats. It is presented first the results for the northeast (Table 10) and then for the southeast region (Table 11).

Initially, taking sales volume as a dependent variable for CS and TF stores in the northeast region, it is possible to observe that sales volume is influenced by price, in-store promotion and by competitor's sales volume. For CS stores, one percent variance in the price in comparison to the market average results in 0,089 ( $\beta_{121}$ ) reduction in sales volume (case of twenty four units of eight ounces). Price shows no significant statistical impact on sales at TF stores in the northeast region. On the other hand, one percentage increase in quantity of stores counting on promotion results in an increase in sales volume of 3,4625 ( $\beta_{132}$ ). Moreover, one percent increase in sales volume from Comp1's competitor, results in a decrease of 3,9793 ( $\beta_{151}$ ) in sales for CS and 5,7902 ( $\beta_{152}$ ) for TF stores. More expressively, the impact of one percent increase in sales volume of the Comp3's competitor results in a 12,1743 ( $\beta_{172}$ ) decrease in sales volume for TF stores.

Price, in turn, shows to be impacted by an increase in sales by competitors in CS stores. Once competitors increase 1% in sales volume, the market leader reduce its price in comparison to the market average in 4,1018 ( $\beta_{251}$ ) percentage points in CS stores when the sales increase is from Comp1 and 2,0489 ( $\beta_{261}$ ) percentage points when Comp2. Controversially, price in TF stores show not to be impacted by changes in competitor's sales volume.

In-store promotion, in the northeast region, shows to be mostly influenced by variances in competitors' sales. One percent increase in Comp1's sales result in an increase of 0,4108 ( $\beta_{352}$ ) for TF stores. Similarly, when the increase is from Comp3, the increase in promotion is 0,9115 ( $\beta_{372}$ ) for TF stores. One percent increase in Comp2's sales result in an increase of 0,2889 ( $\beta_{361}$ ) for CS stores.

Table 10 – Results for the Northeast region

Equation	Coefficient	Chain Self-Service (i=1)		Traditional Full-Service (i=2)	
		Mean	Std. Error	Mean	Std. Error
<b>Sales Volume</b>	lagged sales ( $\beta_{11i}$ )	-0,0980*	0,0591*	-0,1170**	0,0632**
	lagged price ( $\beta_{12i}$ )	-0,0890*	0,0504*	n.s.	n.s.
	lagged promo % ( $\beta_{13i}$ )	n.s.	n.s.	3,4625***	0,9088***
	lagged sazonality ( $\beta_{14i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged Comp1 sales % ( $\beta_{15i}$ )	-3,9793**	1,7645**	-5,7902*	3,375046*
	lagged Comp2 sales % ( $\beta_{16i}$ )	n.s.	n.s.	-	-
	lagged Comp3 sales % ( $\beta_{17i}$ )	-	-	-12,1743*	6,9087*
<b>Price</b>	lagged sales ( $\beta_{21i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged price ( $\beta_{22i}$ )	-0,2907***	0,0561***	-0,3667***	0,0572***
	lagged promo % ( $\beta_{23i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged sazonality ( $\beta_{24i}$ )	0,5390**	0,2586**	n.s.	n.s.
	lagged Comp1 sales % ( $\beta_{25i}$ )	-4,1018***	0,8307***	n.s.	n.s.
	lagged Comp2 sales % ( $\beta_{26i}$ )	-2,0489***	0,7486***	-	-
	lagged Comp3 sales % ( $\beta_{27i}$ )	-	-	n.s.	n.s.
<b>Promotion (WDR)</b>	lagged sales ( $\beta_{31i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged price ( $\beta_{32i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged promo % ( $\beta_{33i}$ )	0,1686**	0,0829**	n.s.	n.s.
	lagged sazonality ( $\beta_{34i}$ )	n.s.	n.s.	0,0858*	0,0485*
	lagged Comp1 sales % ( $\beta_{35i}$ )	n.s.	n.s.	0,4108***	0,1249***
	lagged Comp2 sales % ( $\beta_{36i}$ )	0,2889**	0,1209**	-	-
	lagged Comp3 sales % ( $\beta_{37i}$ )	-	-	0,9115*	0,4817*

\*Significant at  $\alpha \leq 10\%$ . \*\*Significant at  $\alpha \leq 5\%$ . \*\*\*Significant at  $\alpha \leq 1\%$ . Notes: n.s. = not significant at 10%

Source: Author (2016)

Turning to the southeast region (Table 11), sales volume results to be influenced by price only in the CS stores. One percentage point increase in price reduce sales volume in 0,0961 ( $\beta_{421}$ ). In addition, sales volume shows to be impacted by promotion at sales point in TF stores. One percent increase in the quantity of stores with promotion efforts result in an increase in sales of 1,012 ( $\beta_{432}$ ).

Price, in the southeast region, shows to be influenced by in-store promotion. One percent increase in in-store promotion results in a price increase of 1,0909 ( $\beta_{531}$ ) percentage points.

Apparently, competitors' sales have a great impact in the TF stores. However, the high impact in price demonstrated is a consequence of the leader average price increase in comparison to the market average. The competitors Comp4 and Comp6 hold lower prices than the leader under study.

Table 11 – Results for the Southeast region

Equation	Coefficient	Chain Self-Service (i=1)		Traditional Full-Service (i=2)	
		Mean	Std. Error	Mean	Std. Error
<b>Sales Volume</b>	lagged sales ( $\beta_{41i}$ )	-0,1198**	0,0545**	-0,2833***	0,0856***
	lagged price ( $\beta_{42i}$ )	-0,0961*	0,0529*	n.s.	n.s.
	lagged promo % ( $\beta_{43i}$ )	n.s.	n.s.	1,012**	0,5091**
	lagged sazonality ( $\beta_{44i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged Comp4 sales % ( $\beta_{45i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged Comp5 sales % ( $\beta_{46i}$ )	n.s.	n.s.	-	-
	lagged Comp6 sales % ( $\beta_{47i}$ )	-	-	n.s.	n.s.
<b>Price</b>	lagged sales ( $\beta_{51i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged price ( $\beta_{52i}$ )	-0,1652***	0,0435***	-0,4532***	0,1079***
	lagged promo % ( $\beta_{53i}$ )	1,0909***	0,2805***	n.s.	n.s.
	lagged sazonality ( $\beta_{54i}$ )	-1,4130***	0,4275***	n.s.	n.s.
	lagged Comp4 sales % ( $\beta_{55i}$ )	n.s.	n.s.	21,3867***	6,7086***
	lagged Comp5 sales % ( $\beta_{56i}$ )	-1,0424*	0,5405*	-	-
	lagged Comp6 sales % ( $\beta_{57i}$ )	-	-	15,8210***	4,8180***
<b>Promotion (WDR)</b>	lagged sales ( $\beta_{61i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged price ( $\beta_{62i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged promo % ( $\beta_{63i}$ )	0,3707***	0,0408***	n.s.	n.s.
	lagged sazonality ( $\beta_{64i}$ )	n.s.	n.s.	n.s.	n.s.
	lagged Comp4 sales % ( $\beta_{65i}$ )	n.s.	n.s.	-1,0965	0,5589
	lagged Comp5 sales % ( $\beta_{66i}$ )	n.s.	n.s.	-	-
	lagged Comp6 sales % ( $\beta_{67i}$ )	-	-	-0,7042	0,4160

\*Significant at  $\alpha \leq 10\%$ . \*\*Significant at  $\alpha \leq 5\%$ . \*\*\*Significant at  $\alpha \leq 1\%$ . Notes: n.s. = not significant at 10%  
Source: Author (2016)

## 5. DISCUSSIONS AND IMPLICATIONS

In this section, the differences observed in the short-term effect of price and in-store promotion for CS and TF stores are discussed first. Then, the discussion turns towards the comparison of the northeast and southeast regions, and at last, the long-term (persistent) results are introduced.

The results demonstrate that sales volume is mainly influenced by price changes in CS while by promotional efforts in TF stores. For CS, one percent increase in price in comparison to the market impacts an 0,092 (average of  $\beta_{421}$  and  $\beta_{121}$ ) decrease in sales volume (case of twenty four units of eight ounces x 1000). In contrast, sales volume in TF stores showed not to be influenced by price changes but by in-store promotion. By amplifying in-store promotion by one percent, sales volume increases in 2,23 (average of  $\beta_{432}$  and  $\beta_{232}$ ) for TF stores in both regions. Thus, it is possible to infer that CS stores are more price sensitive whereas TF stores are more promotion sensitive.

The finding that price impacts CS sales volume can be supported by the greater brand competition faced in this store format. Indeed, consumers have more options when choosing a product in a CS store than in a TF (Chernev, 2003), being able to easily compare prices in this store format (Venkatesan et al., 2015). Taking into consideration that TF stores showed no sensitivity to price, this finding supports the hypothesis 2 (H2), which mentions that CS stores are more price sensitive than TF stores.

Regarding the finding that in-store promotion shows no significant impact on sales volume for CS stores but TF stores, this can be linked to the great shelf space in CS stores that allows retailers to expose the whole product category (Venkatesan et al., 2015). Hence, CS stores are more likely to offer SKUs on temporary displays that are already offered on the category's shelf space, reducing the impact of temporary displays on sales.

On the other hand, a great problem in the TF stores is product visibility in consequence of restricted available assortments<sup>8</sup>. In some cases, products can even be stored behind the counter to optimize the stores internal space (Venkatesan et al., 2015). Then, temporary displays can frequently expose SKUs that were not available where the whole category is exposed. As in-

---

<sup>8</sup> The Wall Street Journal (2007), "P&G's Global Target: Shelves of Tiny Stores"

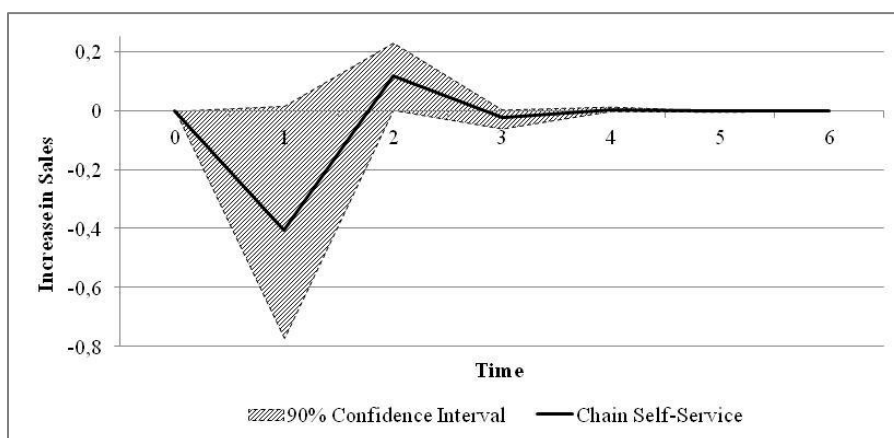


store promotion provides support to raise products' visual attention (Chandon et al., 2009), its higher sensitivity in TF stores can be comprehended.

Additionally, the finding that in-store promotion influences sales volume in TF stores is aligned with previous literature (Montgomery 1975; Rao & McLaughlin, 1989; Collins-Dodd & Louviere 1999; Klink & Smith 2001; Kaufman, Jayachandran & Rose 2006, Völckner & Sattler 2006), which states that advertising and promotion have great relevance in defining consumers' purchase decision in groceries stores.

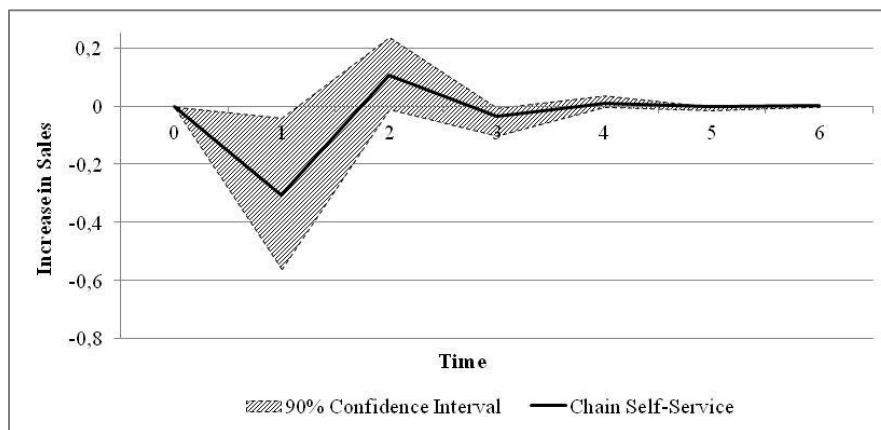
When comparing the northeast and southeast regions, divergences in the effect of price and in-store promotion on sales can be observed. By analyzing the impact of one percentage point decrease in price in comparison to the market average in CS stores, the southeast region shows a greater short-term response on average, by increasing sales volume in 0,0961. On the other hand, the northeast demonstrates 0,089 variance in sales volume. This finding can possibly indicate greater price sensitivity in the southeast region. However, in order to better understand this result, it is necessary to consider a confidence level on the sales volume variance and then analyze the overlap area. The following graphs illustrate the price variance effect on sales volume for CS stores in the southeast and northeast regions respectively.

Figure 3 – Price effect on sales volume for CS stores in the southeast region



Source: Author (2016)

Figure 4 – Price effect on sales volume for CS stores in the northeast region



Source: Author (2016)

Taking into consideration the 90% confidence interval (showed in the above graphs by the shaded area), it is possible to observe a great overlap between the price effect on sales volume for CS stores in the southeast and northeast regions. Hence, it is not reasonable to state that southeast region has greater price sensitivity than the northeast region. Consequently, there is no evidence to support the hypothesis H1a, which affirms that price sensitivity is higher in the northeast region than in the southeast for CS stores. Hence, the claim that the middle and lower socioeconomic strata and regions with budget constraints may be more price-sensitive (Burgess & Steenkamp, 2006; Kamakura & Mazzon, 2013), might not always be applicable. Indeed, the southeast region holds a spending per household of US\$ 26,739 while the northeast region, US\$ 14,974 (Euromonitor, 2014f).

A possible explanation for the similar price sensitivity is the higher competition in the southeast market. The greater income per household in the southeast region makes companies to focus in this market resulting in a brutal competition (Atsmon, Child, Dobbs & Narasimhan, 2012). As in-store promotion and price are a question of survival in a competitive scenario (Blattberg & Neslin, 1990), an intensive usage of these variables can have increased consumers price sensitivity. Indeed, the regular use of sales promotion might increase price sensitivity (Keller, 1998; Gedenk & Neslin, 2000; DelVecchio, Henard & Freling, 2006; Ataman et al., 2010).

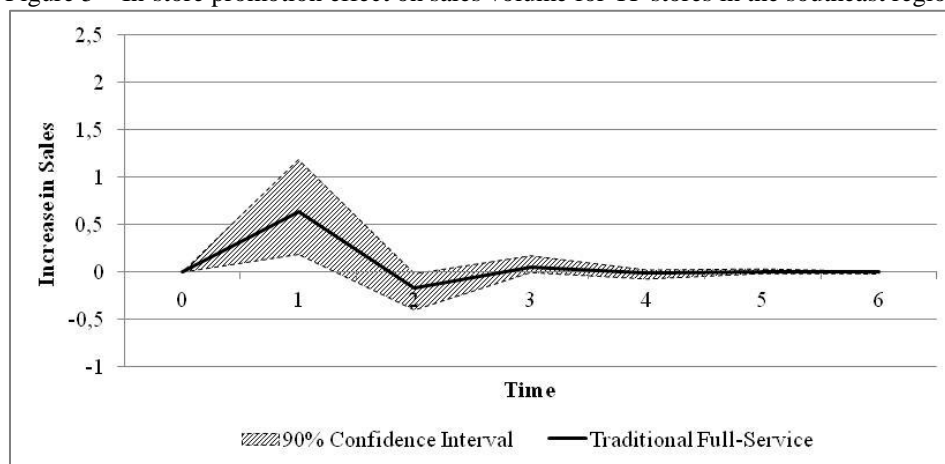
As TF stores showed no sensitivity to price reductions, the hypothesis H1b is rejected because it claims that price sensitivity is higher in the northeast region than in the southeast for TF stores.

The absence of price sensitivity in TF stores can be linked to the lower in-store brand availability, reducing the consumer possibility to compare prices (Chemev, 2003; Venkatesan et al., 2015). Indeed, the difficulty in comparing prices shall reduce price sensitiveness (Venkatesan et al., 2015).

Related to the in-store promotion effect on sales volume, it demonstrates to be a divergent factor when comparing the northeast and southeast regions. In-store promotion, in the northeast region, is a tool to react against competitors' increase in sales in both store formats (TF and CS). For one percent increase in competitors' sales volume, northeast shows a 0,2889 percent increase in the quantity of in-store promotion for CS, while a 0,7 percent increase for TF stores (average of Comp1 and Comp3 results).

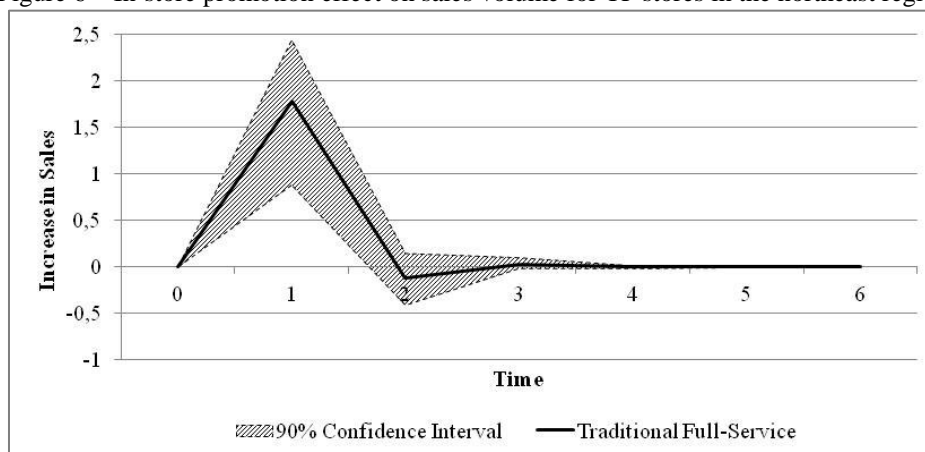
In addition, one percent increase of sales points counting on promotional efforts shows to increase sales volume in both regions. In the northeast region, in-store promotion demonstrates greater impact on sales volume for TF stores, resulting in 3,4625 increase (period average). In the southeast region, the sales volume increase corresponds to 1,012 (period average). The following graphs illustrate the in-store promotion effect on sales for TF stores in southeast and northeast regions respectively.

Figure 5 – In-store promotion effect on sales volume for TF stores in the southeast region



Source: Author (2016)

Figure 6 – In-store promotion effect on sales volume for TF stores in the northeast region



Source: Author (2016)

Considering a 90% confidence interval, it is possible to state that the northeast region shows greater short-term effect of in-store promotion on sales volume for TF stores than the southeast. The overlap area between the northeast and southeast region effect is minimum. This finding supports the hypothesis H3a, which mentions that the effect of in-store promotion on sales volume is higher in the northeast than southeast for TF stores.

The increasing consumption in the northeast market driven by the “new middle class” (Euromonitor, 2014), is a possible explanation for the greater effect of promotion in this region. Indeed, in-store promotion can increase awareness and stimulate the first time purchase (Casielles & Alvarez, 2005; Ehrenberg, Scriven & Barnard, 1997). On the other hand, the southeast market is more mature, counting on a higher competition. As previously stated, a competitive scenario leads companies to intensify the usage of price reductions and promotion by companies (Blattberg & Nelsin, 1990), reducing the effect of these variables on sales.

The figures 5 and 6 demonstrate that in-store promotion has a positive short-term impact on sales for both regions. This factor is aligned with previous published studies (Blattberg, 1995; Casielles & Alvarez, 2005; Ehrenberg, Scriven & Barnard, 1997; Srinivasan, Pauwels, Hanssens & Dekimpe, 2004; Rothschild, 1987; Pauwels, Hanssens & Siddarth, 2002; Ataman et. al, 2010).

In turn, the hypothesis H3b that is related to the effect of in-store promotion on sales for CS stores is rejected. CS stores show no impact on sales when stimulated with an increase in in-store

promotion. As mentioned before in this section, a possible explanation for the absence of promotion effect on sales for CS stores is the promotion data considered in this study (temporary display of products on promotion).

In order to determine the persistency of price and in-store promotion effect on sales the average sales volume change of the following six months after the price or in-promotion impulse was summed up.

Regarding the persistency of in-store promotion effect (6 months) on sales volume, the northeast region shows a positive effect of 1,68 and the southeast an effect of 0,5 for TF stores. This finding supports the hypothesis H5a that claims that the persistency of in-store promotion effect is higher in the northeast for TF stores. In line with this finding is the idea that the northeast region corresponds to a less mature market in comparison to the southeast due to the “new middle class”, which is propelling the consumption in this region (Euromonitor, 2014f). Hence, in-store promotion can be a tool in the northeast region to increase awareness and stimulate the first time purchase (Casielles & Alvarez, 2005; Ehrenberg, Scriven & Barnard, 1997).

Additionally, the reduced positive effect in the southeast region indicates its high competitive environment, driving the use of in-store promotion and increasing the consumers’ sensitivity (Keller, 1998; Gedenk & Neslin, 2000; DelVecchio, Henard & Freling, 2006; Ataman et al., 2010).

As previously explained, the sales volume in CS stores shows not to be impacted by in-store promotion changes. Based on that, the hypothesis H5b, which states that the persistency of in-store promotion effect on sales is higher in the northeast than southeast for CS stores, is rejected.

The same happens with the hypothesis H4a that states that the persistency of price effect on sales is higher in the northeast than southeast for TF stores; however, TF stores demonstrate not to be influenced by price changes.

Related to the persistency of price effect on sales volume for CS stores, the northeast and southeast regions present a negative effect of -0,22 and -0,31 respectively. However, taking into consideration the 90% confidence level, the persistent effect on sales presents a great overlap area. Hence, it is not reasonable to say that the results indicate that the northeast has a better

persistence of price effect on sales volume than the southeast region for CS stores, rejecting the hypothesis H4a.

The persistent positive results of in-store promotion on sales in TF and the negative results of price in CS stores highlight a non convergent finding. Indeed, both marketing variables, in-store promotion and price, show short-term results in the same direction (positive) but divergent when considering the persistence of the effect. This persistence divergence is aligned with previous published studies, which were focused on developed economies (Keane, 1997; Foekens, Leeflang & Wittink, 1998; Jedidi, Mela & Gupta, 1999; Nijs, Dekimpe, Steenkamp & Hanssens, 2001; Ataman, Mela & Heerde, 2010). These studies informed that the persistence of price and promotion effect on sales can be either positive or negative.

## 6. CONCLUSION

The presented study answers the request question of: what is the effect of retail price and in-store promotion (i.e., temporary display of products on promotion) on sales to consumers in an emerging market? Additionally, how does this relation occur in different regions with specific characteristics within an emerging market?

To answer this question, five hypotheses were built based on the ideas presented by previously published studies related to the effect of price and promotion on sales volume. Divergences between the findings of this study and previous literature were expected as emerging markets shall have distinct effects of marketing variables in comparison to developed economies (Sheth, 2011). Indeed, prior studies (Ehrenberg, Scriven & Barnard, 1997; Gupta, 1998; Pauwels, Hanssens & Siddarth, 2002; Casielles & Alvarez, 2005; Steiner, 2007; Ataman et al., 2010) concentrated their attention on developed economies.

The following table summarizes the hypotheses covered in this study and their results.

Table 12 – Hypothesis summary

	Hypothesis	Variable under analysis	Results
H1a	In the chain self-service stores, price sensitivity is higher in the northeast than in the southeast.	Price	Rejected. Regions present similar price sensitivity patterns
H1b	In the traditional full-service stores, price sensitivity is higher in the northeast than in the southeast.	Price	Rejected. Traditional full-service stores show not to be significantly influenced by price changes
H2	In both regions, northeast and southeast, price sensitivity is higher in chain self-service than traditional full-service stores.	Price	Accepted
H3a	In the traditional full-service stores, the effect on sales of an increase in the availability of stores with sales promotions for products on temporary displays is higher in the northeast market than in the southeast.	In-store promotion	Accepted
H3b	In the chain self-service stores, the effect on sales of an increase in the availability of stores with sales promotions for products on temporary displays is higher in the northeast market than in the southeast.	In-store promotion	Rejected. Chain self-service stores show not to be significantly influenced by in-store promotion changes
H4a	In the traditional full-service stores, the persistency of price effect on sales is higher in the northeast market than in the southeast.	Price	Rejected. Traditional full-service stores show not to be significantly influenced by price changes
H4b	In the chain self-service stores, the persistency of price effect on sales is higher in the northeast market than in the southeast.	Price	Rejected. Regions present similar patterns of price persistency effect on sales
H5a	In the traditional full-service stores, the persistency of an increase in the availability of stores with sales promotions for products on temporary displays effect on sales is higher in the northeast market than in the southeast.	In-store promotion	Accepted
H5b	In the chain self-service stores, the persistency of an increase in the availability of stores with sales promotions for products on temporary displays effect on sales is higher in the northeast market than in the southeast.	In-store promotion	Rejected. Chain self-service stores show not to be significantly influenced by in-store promotion changes

Source: Author (2016)

As can be observed in the hypothesis summary table, the price sensitivity showed no relevant difference between the northeast and southeast region for CS stores. A greater sensitivity in the northeast market was expected, in consequence of the lower spending per household in this region. However, despite the heterogeneous characteristic of these regions, price sensitivity



shows not to be affected by them. As sales volume in the TF stores demonstrates not to be affected by price, no conclusion can be raised for this specific store format.

When comparing the price sensitivity for CS and TF stores, the results followed the ideas supported by previous researches. The greater product availability, the higher level of unplanned purchases and the facility to compare prices in the CS stores (Chernev, 2003; Bell, Corsten, & Knox, 2011; Venkatesan et al., 2015) seem to have brought greater price sensitivity to this store format.

The in-store promotion followed the expected effects for TF stores, showing a positive effect on sales volume. This supports the idea that the greater visibility provided by in-store promotion is a relevant strategy, once TF stores have limited space and products might be difficult to be visualized by consumers (Chandon et al., 2009; Kumar, Shah & Zhao, 2015; Venkatesan et al., 2015). Additionally, TF stores in the northeast region demonstrate higher in-store promotion sensitivity than in the southeast. This aspect can be supported by the increasing consumption of juice by the “new middle class” in the northeast region, leveraging promotion efforts effect on sales.

Related to the persistency of price and in-store promotion effect on sales, price shows to reach negative results in a 6 month period for CS stores while in-store promotion reach a positive result for TF stores. This point highlights an interesting divergence between these two marketing variables as in the short-term both show positive results. Prior studies (Keane, 1997; Foekens, Leeflang & Wittink, 1998; Jedidi, Mela & Gupta, 1999; Nijs, Dekimpe, Steenkamp & Hanssens, 2001; Ataman, Mela & Heerde, 2010) had revealed a divergent persistent effect in developed economies, in which the persistency of price and promotion effect on sales could be positive or negative. Consequently, emerging markets apparently present the same divergent trend.

In summary, these results contribute to the literature informing that price sensitivity is mainly influenced by store formats and not by the economic condition of regions in an emerging market. Hence, the usual assumption that regions with lower spending per household are more price sensitive (Burgess & Steenkamp, 2006) may not always be applicable. Furthermore, in-store promotion shows to be influenced by store format and region economic conditions. From an overall perspective, the findings support the previous statement of Bronnenberg, Mahajan &

Vanhonacker (2000), explaining that characteristics of promotions effect in emerging markets and developed economies are potentially distinct. In addition, the results confirm the heterogeneity characteristic of emerging markets (Sheth, 2011).

The differences identified between the effects of price and in-store promotion on sales emphasize the need for researchers in the marketing field to direct their attention to emerging markets (Burgess & Steenkamp, 2006).

In the spectrum of the region and retail formats comparison, this study also aggregates in the business context. The understanding of the specific market characteristics is essential to achieve business growth through marketing initiatives (Sheth, 2011; Burges & Steenkamp, 2013) and success of a brand in an emerging market (Kumar, Sunder & Sharma, 2015). Indeed, this studied showed that price and in-store promotion have different effects on sales volume in the considered regions and retail formats. Thus, companies shall take these differences into consideration when customizing their marketing strategies.

#### 6.1. Limitations and opportunities for further studies

Readers shall be aware about the potential limitations of this study. First of all, only one category under the beverage segment was considered. The category under consideration (juice) can hold specific effects of price and in-store promotion bringing the results to be biased in their direction. In this regard, future studies can encompass greater categories in the beverage segment or perform similar application across different segments.

Secondly, the sales period corresponds to a three year length, from January 2010 to January 2013. No special event happened in Brazil during this period that would cause the analysis to be disregarded. However, the sales data can hide purchasing aspects characteristic from that period.

Thirdly, channels were broken down in two main categories, TF and CS stores. However, there are plenty of different channels that shall present different behaviours when stimulated with changes in price and promotion. Consequently, an interesting opportunity of further studies is to go deeper into the channels exploration, dividing CS and TF in other sub-categories.

Fourthly, the analyzed database is aggregated on a region level. Inside each region, there are locations with different economic power. Hence, the concentration of audit points in specific locations can add a bias to the analysis. For instance, the audit entity who built this database might have greater audit points in locations with higher economic power in the northeast, reducing the potential price or promotion sensitivity in the region. As the audit entity that provided the database is very well known and recognized in the market, this audit bias risk is minimal.

Fifthly, the analysis was focused on the Brazilian market, which corresponds to an important market inside of the emerging markets group. Future researchers can perform similar analysis in different emerging markets and then compare the results with the ones presented in this study. This comparison can add to the literature by setting the effects of the marketing mix variables in emerging markets. Indeed, a vast number of studies were realized in the developed economies.

At last, this study proposed to analyze promotion in a global context encompassing a wide range of sales promotion in a single variable. Based on that, researchers can build on this idea and perform more detailed analysis considering a single aspect of sales promotion. For example, the effect of coupons on sales volume in different regions of an emerging market.

## 7. REFERENCES

- Abel, A., Bemanke, B. & Croushore. (1952). *Macroeconomics*, 8<sup>th</sup> edition, Pearson.
- Abreu, C. B. (1994). O comportamento do consumidor diante da promoção de vendas: um estudo da relação preço-qualidade percebida. *Revista de Administração de Empresas*, 34(4), 64-73.
- Ailawadi, K. L., Harlam, B. A., Cesar, J., & Trounce, D. (2006). Promotion profitability for a retailer: the role of promotion, brand, category, and store characteristics. *Journal of Marketing Research*, 43(4), 518-535.
- Arnold, S. J., Oum, T. H., & Tigert, D. J. (1983). Determinant attributes in retail patronage: seasonal, temporal, regional, and international comparisons. *Journal of Marketing Research*, 149-157.
- Ataman, M. B., Mela, C. F., & Van Heerde, H. J. (2008). Building brands. *Marketing Science*, 27(6), 1036-1054.
- Ataman, M. B., Van Heerde, H. J., & Mela, C. F. (2010). The long-term effect of marketing strategy on brand sales. *Journal of Marketing Research*, 47(5), 866-882.
- Atsmon, Y.; Child, P.; Dobbs, R. & Narasimhan, L. (2012). “Winning the 30 trillion decathlon going for gold in emerging markets,” *McKinsey & Company Publishing*, available at: [http://www.mckinsey.com/insights/strategy/winning\\_the\\_30\\_trillion\\_decathlon\\_cgoing\\_for\\_gold\\_in\\_emerging\\_markets](http://www.mckinsey.com/insights/strategy/winning_the_30_trillion_decathlon_cgoing_for_gold_in_emerging_markets) ( Accessed in November, 8, 2014).
- Aydinli, A., Bertini, M., & Lambrecht, A. (2014). Price promotion for emotional impact. *Journal of Marketing*, 78(4), 80-96.
- Banco Central do Brasil. (2012). “A Classe média,” available at: [http://www.bcb.gov.br/secre/apres/Alessandra\\_Ninis\\_SAE\\_PR.pdf](http://www.bcb.gov.br/secre/apres/Alessandra_Ninis_SAE_PR.pdf) (Accessed in January, 6, 2015).
- Bell, D. R., Corsten, D., & Knox, G. (2011). From point of purchase to path to purchase: How preshopping factors drive unplanned buying. *Journal of Marketing*, 75(1), 31-45.
- Bemmaor, A. C., & Mouchoux, D. (1991). Measuring the short-term effect of in-store promotion and retail advertising on brand sales: A factorial experiment. *Journal of Marketing Research*, 202-214.
- Bijmolt, T. H., Heerde, H. J. V., & Pieters, R. G. (2005). New empirical generalizations on the determinants of price elasticity. *Journal of marketing research*, 42(2), 141-156.
- Blattberg, R. C., Briesch, R., & Fox, E. J. (1995). How promotions work. *Marketing science*, 14(3\_supplement), G122-G132.

Blattberg, R. C., & Neslin, S. A. (1990). *Sales promotion: Concepts, methods, and strategies* (pp. 313-43). Englewood Cliffs, NJ: Prentice Hall.

Booms, B. H., & Bitner, M. J. (1981). Marketing strategies and organization structures for service firms. *Marketing of services*, 25(3), 47-52.

Boone, L. E., & Kurtz, D. L. (1999). *Contemporary Marketing: 1999*. Harcourt Brace College Publishers.

Borden, N. H. (1964). The concept of the marketing mix. *Journal of advertising research*, 4(2), 2-7.

Bronnenberg, B. J., Mahajan, V., & Vanhonacker, W. R. (2000). The emergence of market structure in new repeat-purchase categories: The interplay of market share and retailer distribution. *Journal of Marketing Research*, 37(1), 16-31.

Brüggemann, R. (2004). *Model reduction methods for vector autoregressive processes* (Vol. 536). Springer Science & Business Media.

Burgess, S. M., & Steenkamp, J. B. E. (2006). Marketing renaissance: How research in emerging markets advances marketing science and practice. *International Journal of Research in Marketing*, 23(4), 337-356.

Burnham, K. P., & Anderson, D. R. (2004). Multimodel inference understanding AIC and BIC in model selection. *Sociological methods & research*, 33(2), 261-304.

Buyukkurt, B. K., & Buyukkurt, M. D. (1986). Perceived correlates of store price image-an application of the bootstrap. *Advances in Consumer Research*, 13, 42-47.

Alvarez, B., & Vázquez Casielles, R. (2005). Consumer evaluations of sales promotion: the effect on brand choice. *European Journal of Marketing*, 39(1/2), 54-70.

Cabral, M. (2008). Traditional full-service (left side) and Chain self-service (right side). [Figure 1]. Available at [http://g1.globo.com/noticias/economia\\_negocios/0,,mul651717-9356,00-com+novos+servicos+mercado+de+lojas+de+conveniencia+cresce+ao+ano.html](http://g1.globo.com/noticias/economia_negocios/0,,mul651717-9356,00-com+novos+servicos+mercado+de+lojas+de+conveniencia+cresce+ao+ano.html)

Chandon, Pierre, J. Wesley Hutchinson, Eric T. Bradlow & Scott H. Young (2009). “Does in-store marketing work? Effects of the number and position of shelf facings on brand attention and evaluation at the point of sales,” *Journal of Marketing*, 73 (November), 1-17.

Chernev, Alexander (2003), “Product Assortment and Individual Decision Processes,” *Journal of Personality and Social Psychology*, 85 (July), 151–62.

Cleeren, K., Verboven, F., Dekimpe, M. G., & Gielens, K. (2010). Intra-and interformat competition among discounters and supermarkets. *Marketing science*, 29(3), 456-473.

ClickPB. (2013). Traditional full-service (left side) and Chain self-service (right side). [Figure 1]. Available at <http://www.clickpb.com.br/economia/extra-investe-mais-de-r-10-milhoes-e-inaugura-primeiro-supermercado-nos-bancarios-156222.html>

Clifford, S. (2012). "Knowing Cost, the Customer Sets the Price," *The New York Times*, available at: [http://www.nytimes.com/2012/03/28/business/retailers-rush-to-adjust-to-price-smart-shoppers.html?adxnnl=1&adxnnlx=1421247610s53vPkJxmRbsj0eE7wOWBA&\\_r=1&](http://www.nytimes.com/2012/03/28/business/retailers-rush-to-adjust-to-price-smart-shoppers.html?adxnnl=1&adxnnlx=1421247610s53vPkJxmRbsj0eE7wOWBA&_r=1&) ( Accessed in January, 14, 2015).

Collins-Dodd, C., & Louviere, J. J. (1999). Brand equity and retailer acceptance of brand extensions. *Journal of Retailing and Consumer Services*, 6(1), 1-13. CONSTANTINIDES, E. The 4S Web-Marketing Mix Model. *Electronic Commerce Research and Applications*, 1(1), 57-76. 2002.

Cooper, P. (1969). The begrudging index and the subjective value of money. *London: Staples Press, Ltd*, 122-31.

De abreu filho, G.; Calicchio, N; & Lunardini, F. (2003). "Brand building in emerging markets," *Mckinsey & Company Quarterly, Special Edition*, available at: [http://www.mckinsey.com/insights/winning\\_in\\_emerging\\_markets/building\\_brands\\_in\\_emerging\\_markets](http://www.mckinsey.com/insights/winning_in_emerging_markets/building_brands_in_emerging_markets) (Accessed in November, 12, 2014)

Dekimpe, M. G., & Hanssens, D. M. (1995). The persistence of marketing effects on sales. *Marketing Science*, 14(1), 1-21.

Dekimpe, M. G., & Hanssens, D. M. (1999). Sustained spending and persistent response: A new look at long-term marketing profitability. *Journal of Marketing Research*, 397-412.

Dekimpe, M. G., Hanssens, D. M., & Silva-Risso, J. M. (1998). Long-run effects of price promotions in scanner markets. *Journal of econometrics*, 89(1), 269-291.

Dekimpe, M. G., & Hanssens, D. M. (2010). Time-series models in marketing: some recent developments. *Journal of Research in Marketing*, 1, 93-98.

DelVecchio, D., Henard, D. H., & Freling, T. H. (2006). The effect of sales promotion on post-promotion brand preference: A meta-analysis. *Journal of retailing*, 82(3), 203-213.

Diamantopoulos, A. (1991). Pricing: theory and evidence—a literature review. *Perspectives on marketing management*, 1, 63-192.

Diaz, Alejandro, Jorge A. Lacayo and Luis Salcedo (2007), "Selling to 'mom-and-pop' stores in emerging markets," *McKinsey Quarterly*, available at: [https://www.mckinseyquarterly.com/Selling\\_to\\_mom-and-pop\\_stores\\_in\\_emerging\\_markets\\_1957](https://www.mckinseyquarterly.com/Selling_to_mom-and-pop_stores_in_emerging_markets_1957) (Accessed August, 12, 2015).

Diaz, Alejandro, Max Magni and Felix Poh (2012), "From oxcart to Wal-Mart: Four keys to reaching emerging-markets consumers," available at:

[http://www.mckinsey.com/insights/winning\\_in\\_emerging\\_markets/from\\_oxcart\\_to\\_walmart\\_four\\_keys\\_to\\_reaching\\_emerging-market\\_consumers](http://www.mckinsey.com/insights/winning_in_emerging_markets/from_oxcart_to_walmart_four_keys_to_reaching_emerging-market_consumers) (Accessed August, 12, 2015).

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of marketing research*, 307-319.

Ehrenberg, A., Scriven, J., & Barnard, N. (1997). Advertising and price. *Journal of Advertising Research*, 37(3), 27-36.

Estadão. (2013). "Empreendedores apostam no suco pronto saudável e (muito) lucrativo," available at: <http://pme.estadao.com.br/noticias/noticias,empreendedores-apostam-no-suco-pronto-saudavel-e-muito-lucrativo,3589,0.htm> (Accessed in February, 26, 2015).

Euromonitor. (2007). Brazil's regional inequalities.

Euromonitor. (2014a). Business environment: Brazil.

Euromonitor. (2014b). Brazil: Country Profile.

Euromonitor. (2014c). Consumer Lifestyles in Brazil.

Euromonitor. (2014d). Emerging Markets: Overview and Growth in opportunities in grocery channels.

Euromonitor. (2014e). Income and Expenditure Brazil.

Euromonitor. (2014f). Income and Expenditure Brazil: Why Brazil Is an Attractive Consumer Market with Challenges.

Euromonitor. (2014g). Retailing in Brazil.

Euromonitor. (2014h). Risks and Vulnerabilities: Brazil.

Euromonitor. (2015a). Juice brand Share in Brazil.

Farris, P. & Ailawadi, K. (2013). How Companies Can Get Smart About Raising Prices. *The Wall Street Journal*.

Faveiro, L., Belfiore, P., Silva, F., & Cham, B. (2009). Análise de dados: modelagem multivariada para tomada de decisão. São Paulo: Campus.

Felsted, A. (2014). "Sainsbury reduces spending to fund £150M price cuts," *Financial Times*, available at: [http://www.ft.com/intl/cms/s/0/884bd4fc-6a3c-11e4-bfb400144feabdc0.html#ax\\_z3Opx22Ap3](http://www.ft.com/intl/cms/s/0/884bd4fc-6a3c-11e4-bfb400144feabdc0.html#ax_z3Opx22Ap3) (Accessed in January, 15, 2015).

Felsted, A. (2015). "Tesco confirms wave of price reductions," *Financial Times*, available at: <http://www.ft.com/intl/cms/s/0/8c09f5f4-96a8-11e4-a83c00144feabdc0.html?siteedition=intl#axzz3Opx22Ap3> (Accessed in January, 14, 2015).

- Fioratti, A. (2006). The low income consumer: A growth opportunity. *Research paper. ESOMAR - European Society for Opinion and Market Research*.
- Foekens, E. W., Leeflang, P. S., & Wittink, D. R. (1998). Varying parameter models to accommodate dynamic promotion effects. *Journal of Econometrics*, 89(1), 249-268.
- Forbes (2012a). “Retail’s Big Question: Is the Price right?,” available at: <http://www.forbes.com/sites/gregpetro/2012/12/11/retails-big-question-is-the-price-right/> (Accessed in January, 14, 2015).
- Forbes (2011). “What makes emerging markets great investments?,” available at: <http://www.forbes.com/pictures/eglg45gdjd/why-invest-in-emerging-markets-2/> (Accessed in October, 20, 2014).
- Forbes (2012b). “When altering your company’s pricing strategy, consider consumer’s shopping patterns,” available at: <http://www.forbes.com/sites/prospornow/2012/06/04/when-altering-your-companys-pricing-strategy-consider-consumers-shopping-patterns/>. (Accessed in October, 12, 2014).
- Forbes (2014a). “Why are Wal-Mart’s Margins Gradually Declining?,” available at: <http://www.forbes.com/sites/greatspeculations/2014/09/09/why-are-wal-marts-margins-gradually-declining/> (Accessed in January, 14, 2015).
- Forbes (2014b). “Why prices power is the secret to value investing,” available at: <http://www.forbes.com/sites/gregpetro/2014/08/06/why-pricing-power-is-the-real-secret-to-value-investing/> (Accessed in January, 14, 2015).
- Gedenk, K., & Neslin, S. A. (2000). The role of retail promotion in determining future brand loyalty: Its effect on purchase event feedback. *Journal of Retailing*, 75(4), 433-459.
- Gil, A. (2006). Como elaborar projetos de pesquisa. 4th edition. São Paulo: Atlas.
- Godoi, C. K., & Balsini, C. P. (2006). A pesquisa qualitativa nos estudos organizacionais brasileiros: uma análise bibliométrica. SILVA, Anielson Barbosa da; \_\_\_\_\_, Christiane Kleinübing; BANDEIRA-DE-MELLO, Rodrigo. *Pesquisa Qualitativa em Estudos Organizacionais: paradigmas, estratégias e métodos*. São Paulo: Saraiva, 89-107.
- Goi, C. L. (2005). Marketing mix: a review of ‘P’. *Journal of Internet Banking and Commence*, 10(2).
- Gouveia de Souza, Marcos (2009), “O Varejo vai a luta”, available at: <http://www.idv.org.br/imprensa-artigo.aspx?IdArtigo=417> (Accessed in August, 13, 2015).
- Grönroos, C. (1994). From marketing mix to relationship marketing: towards a paradigm shift in marketing. *Management decision*, 32(2), 4-20.
- Guiltinan, J. P., & Gundlach, G. T. (1996). Aggressive and predatory pricing: A framework for analysis. *The Journal of Marketing*, 87-102.



- Gupta, S. (1988). Impact of sales promotions on when, what, and how much to buy. *Journal of Marketing research*, 342-355.
- Hair Jr, J. F., Babin, B., Money, A. H., & Samouel, P. (2005). Fundamentos de métodos de pesquisa em administração.
- Hale, D. (2012). The Importance of Emerging Markets. In *CFA Institute Conference Proceedings Quarterly* (Vol. 29, No. 3, pp. 43-50). CFA Institute.
- Hanssens, D. M., Parsons, L. J., & Schultz, R. L. (2003). *Market response models: Econometric and time series analysis* (Vol. 12). Springer Science & Business Media.
- Quelch, J. (2007). When your product becomes a commodity. Harvard Business News, Cambridge, MA: 2007. Available in: <http://hbswk.hbs.edu/item/5830.html> (Access in October, 12, 2014).
- IBGE (2010). “Taxa de urbanização,” available at: <http://seriesestatisticas.ibge.gov.br/series.aspx?no=10&op=0&vcodigo=POP122&t=taxa-urbanizacao> (Accessed in February, 24, 2015).
- IBGE (2011). “População residente,” available at: <http://seriesestatisticas.ibge.gov.br/series.aspx?no=10&op=0&vcodigo=PD335&t=populacao-residente> (Accessed in February, 24, 2015).
- Indounas, K., & Avlonitis, G. J. (2009). Pricing objectives and their antecedents in the services sector. *Journal of Service Management*, 20(3), 342-374.
- Jedidi, K., Mela, C. F., & Gupta, S. (1999). Managing advertising and promotion for long-run profitability. *Marketing science*, 18(1), 1-22.
- Kaufman, P., Jayachandran, S., & Rose, R. L. (2006). The role of relational embeddedness in retail buyers' selection of new products. *Journal of Marketing Research*, 43(4), 580-587.
- Kamakura, W. A., & Mazzon, J. A. (2013). Socioeconomic status and consumption in an emerging economy. *International Journal of Research in Marketing*, 30(1), 4-18.
- Keane, M. P. (1997). Modeling heterogeneity and state dependence in consumer choice behavior. *Journal of Business & Economic Statistics*, 15(3), 310-327.
- Keller, K. (1998). “Strategic Brand Management,” Upper Saddle River, NJ: Prentice Hall.
- Klink, R. R., & Smith, D. C. (2001). Threats to the external validity of brand extension research. *Journal of marketing research*, 38(3), 326-335.

- Kotler, P., Armstrong, G., Wong, V., & Saunders, J. (2008). *Principles of marketing*, 5<sup>a</sup> edition. Financial Times/Prentice Hall.
- Kotler, P. & Keller, K. (2005). *Administração de Marketing*, 12<sup>th</sup> edition. New York: Prentice Hall.
- Kuha, J. (2004). AIC and BIC comparisons of assumptions and performance. *Sociological Methods & Research*, 33(2), 188-229.
- Kumar, V., Sunder, S., & Sharma, A. (2015). Leveraging Distribution to maximize firm performance in Emerging markets. *Journal of Retailing*, 91(4), 627-643.
- Kumar, V., Shah, D. & Zhao, Y. (2015). Diagnosing Brand Performance: Accounting for the Dynamic Impact of Product Availability with Aggregate Data. *Journal of Marketing Research*, 52(2), 147-165.
- Lanzilloti, R. (1958). Pricing Objectives in Large Companies, *The American Economic Review*. Vol. 48, No. 5.
- Lenartowicz, Tomasz and Sridhar Balasubramanian (2009), Practices and Performance of Small Retail Store in Developing Economies, *Journal of International Marketing*, 17 (1) 58-90.
- Levy, M., Weitz, B. A., & Ajay, P. (2009). *Retailing Management (Skimming and Scanning)*. Tata McGraw-Hills Publ. Co. Ltd., New Delhi.
- Lopes, A., Reis, A. & Abukawa, A. (1996). Aplicação dos 4 P's na indústria papelreira: O caso Brasileiro, *Caderno de Pesquisa em Administração*. São Paulo, V.1, No.2.
- Love, I., & Zicchino, L. (2006). Financial development and dynamic investment behavior: Evidence from panel VAR. *The Quarterly Review of Economics and Finance*, 46(2), 190-210.
- Makridakis, S., Wheelwright, S. C., & Hyndman, R. J. (2008). *Forecasting methods and applications*. John Wiley & Sons.
- McCarthy, E. J. (1964). *Basic Marketing*, Richard D. Irwin, Homewood, IL.
- Möller, K. (2006). *The Marketing Mix Revisited: Towards the 21st Century Marketing* by E. Constantinides. L
- Monroe, K. B. (1979). *Pricing: Making profitable decisions* (pp. 37-46). New York: McGraw-Hill.
- Monroe, K. B., & Petroschius, S. M. (1981). Buyers' perceptions of price: An update of the evidence. *Perspectives in consumer behavior*, 3(23), 42.
- Monroe, K. B. (1990). *Pricing-Making Profitable Decisions*, McGraw Hill. New York.

- Montgomery, D. B. (1975). New product distribution: An analysis of supermarket buyer decisions. *Journal of Marketing Research*, 255-264.
- Neri, M. C. (2010). The new middle class in Brazil: the bright side of the poor. *Río de Janeiro: Fundação Getulio Vargas & Instituto de Economia Brasileiro*.
- Nevo, A., & Wolfram, C. (2002). Why do manufacturers issue coupons? An empirical analysis of breakfast cereals. *RAND Journal of Economics*, 319-339.
- Neslin, S. A., Grewal, D., Leghorn, R., Shankar, V., Teerling, M. L., Thomas, J. S., & Verhoef, P. C. (2006). Challenges and opportunities in multichannel customer management. *Journal of Service Research*, 9(2), 95-112.
- Nielsen. (2014). Brazil Retail Index.
- Nielsen (2014a). “Com desempenho superior em relação ao Brasil, Nordeste é uma grande aposta para novos mercados,” available at: <http://www.nielsen.com/br/pt/insights/news/2014/Com-desempenho-superior-em-relacao-ao-Brasil-nordeste-e-uma-grande-aposta-para-novos-mercados.html> (Accessed in November, 10, 2014).
- Nijs, V. R., Dekimpe, M. G., Steenkamps, J. B. E., & Hanssens, D. M. (2001). The category-demand effects of price promotions. *Marketing science*, 20(1), 1-22.
- Pauwels, K. (2004). How dynamic consumer response, competitor response, company support, and company inertia shape long-term marketing effectiveness. *Marketing Science*, 23(4), 596-610.
- Pauwels, K., Hanssens, D. M., & Siddarth, S. (2002). The long-term effects of price promotions on category incidence, brand choice, and purchase quantity. *Journal of marketing research*, 39(4), 421-439.
- Rao, Akshay R., Mark E. Bergen, and Scott Davis (2000), “How to Fight a Price War,” *Harvard Business Review*, 78 (March–April), 107–116.
- Rao, V. R., & McLaughlin, E. W. (1989). Modeling the decision to add new products by channel intermediaries. *The Journal of Marketing*, 80-88.
- Renard, T. (2009). A BRIC in the world: Emerging powers, Europe and the coming order. Egmont Paper No. 31, October 2009.
- Reynoso, J. & Levy, P. (2014). “Commercial Opportunities in Brazil for U.S. Firms,” *ENR: Engineering News-Record*. Vol. 274, nº 5.
- Rockefeller, D. (1986). Value versus price. *Bell Atlantic Quarterly*, 3(1), 42-49.
- Rothschild, M. L. (1987). A behavioral view of promotions effects on brand loyalty. *Advances in Consumer Research*, 14(1).

- Sarma, E. A. S. (2005). Need for caution in retail FDI. *Economic and Political Weekly*, 4795-4798.
- Schneider, J. & Hall, J. (2011). "Why most product launches fail," *Harvard Business review*, available at: <https://hbr.org/2011/04/why-most-product-launches-fail> (Accessed in April, 16, 2015).
- Semenik R. & Bamossy, G. (1992). Principles of marketing, South-Western, 2nd edition.
- Sheth, J. N. (2011). Impact of emerging markets on marketing: Rethinking existing perspectives and practices. *Journal of Marketing*, 75(4), 166-182.
- Shimp, T. A. (1993). Promotion Management and Marketing Communications, 3rd edition, Dryden, Chicago.
- Singh, V. P., Hansen, K. T., & Blattberg, R. C. (2006). Market entry and consumer behavior: An investigation of a Wal-Mart supercenter. *Marketing Science*, 25(5), 457-476.
- Souza, A. & Lamounier, B. (2010). A classe média brasileira, São Paulo: Elsevier-Campus.
- Srinivasan, S., Pauwels, K., Hanssens, D. M., & Dekimpe, M. G. (2004). Do promotions benefit manufacturers, retailers, or both?. *Management Science*, 50(5), 617-629.
- Srinivasan, S., Leszczyc, P. T. P., & Bass, F. M. (2000). Market share response and competitive interaction: The impact of temporary, evolving and structural changes in prices. *International Journal of Research in Marketing*, 17(4), 281-305.
- Steenkamp, J. B. E., Nijs, V. R., Hanssens, D. M., & Dekimpe, M. G. (2005). Competitive reactions to advertising and promotion attacks. *Marketing science*, 24(1), 35-54.
- Steiner, W. J., Brezger, A., & Belitz, C. (2007). Flexible estimation of price response functions using retail scanner data. *Journal of retailing and consumer services*, 14(6), 383-393.
- Taher, A., & El Basha, H. (2006). Heterogeneity of consumer demand: opportunities for pricing of services. *Journal of Product & Brand Management*, 15(5), 331-340.
- Varki, S., & Colgate, M. (2001). The role of price perceptions in an integrated model of behavioral intentions. *Journal of Service Research*, 3(3), 232-240.
- Vartanian, P. R. (2008). *Choques monetários e cambiais sob regimes de câmbio flutuante nos países membros do Mercosul* (Doctoral dissertation, Universidade de São Paulo).
- Vartanian, T. P. (2011). Secondary data analysis. New York, NY: Oxford
- Veja (2014). "Por que o suco de laranja custa tão caro no Brasil," available at: <http://veja.abril.com.br/noticia/economia/por-que-o-suco-de-laranja-custa-ao-carro-no-brasil> (Accessed in February, 26, 2015).

- Venkatesan, R., Farris, P., Guissoni, L. A., & Neves, M. F. (2015). Consumer Brand Marketing through Full-and Self-Service Channels in an Emerging Economy. *Journal of Retailing*, 91(4), 644-659.
- Völckner, F., & Sattler, H. (2006). Drivers of brand extension success. *Journal of marketing*, 70(2), 18-34.
- Wang, Y., & Liu, Q. (2006). Comparison of Akaike information criterion (AIC) and Bayesian information criterion (BIC) in selection of stock–recruitment relationships. *Fisheries Research*, 77(2), 220-225.
- Wilbur, K. C., & Farris, P. W. (2014). Distribution and market share. *Journal of Retailing*, 90(2), 154-167.
- Wilson, D., & Purushothaman, R. (2003). *Dreaming with BRICs: The path to 2050* (Vol. 99). Goldman, Sachs & Company.
- Wilson, H., Street, R., & Bruce, L. (2008). *The Multichannel Challenge*. Routledge.
- World Bank (2014). “Country and Lending groups,” available at: <http://data.worldbank.org/about/country-and-lending-groups> (Accessed in November, 01, 2014).
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *The Journal of marketing*, 2-22.