The effects of consumer behavior on the virtualization of the Brazilian supply chain

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Abstract

The current thesis addresses the E-commerce and its implications on the virtualization of the supply chain. Initially a brief description of the Brazilian Political, Economic, Social and Technological factors is discussed bringing valid information about Brazilian market. After that, three sectors in the Brazilian economy were selected – the Retail, Telecommunication and the Publishing sector. Each one of than being represented by a “Star Company” that have shown a great performance while operating on the Brazilian e-commerce. The “Star Companies” Americanas.com, VIVO and Saraiva respectively to their sectors, were benchmarked on this research. In addition, a questionnaire was applied to raise qualitative information about the consumer behavior when shopping by the internet. Moreover, a meeting with Prof. Alberto Luiz Albertin, an expert on the Brazilian e-commerce and two more conversations with representatives from VIVO and Saraiva were hold. Finally, as a result of the integration of the most important ideas the conclusions are made also providing recommendations for the DaVinc3i project when considering entering on the Brazilian e-commerce in the future via FloraHolland.

Keywords: E-commerce, Supply Chain, Brazil, DaVinc3i project
1. Introduction

The horticultural sector in the Netherlands has been rather successful and world-class. Serving as the main trading hub for Europe, have a huge impact on the Dutch economy and its international reputation is based on the existence of innovative growers and entrepreneurs, the cooperative habit and the support of an effective system of research, extension and education in agriculture.

The Dutch horticultural sector is the largest exporter of fresh-products in Europe, the top-3 largest exporter in the world.

In order to sustain its current leading position by innovation and entrepreneurship, the parties involved have initiated the DaVinc3i project aiming to prepare the horticultural sector for the virtualization changes on the supply chain seeking for a flowering future.

As a part of the DaVinc3i project, this study aims to gather valid information regarding the consumer behavior on the virtualization of the Brazilian supply chain and the perspectives for the e-commerce in Brazil.

In this sense, three sectors on the Brazilian economy that have shown an expressive growth in the e-commerce sales in the last years were selected to be benchmarked. The Retail, Publishing and the Telecommunications sectors. For each sector, a “Star Company” was selected, Americana.com, Saraiva and VIVO respectively. Based on this “Star Companies” information a benchmark study was held.

Besides Brazil, this same research will be held also on other fast-growing economies, in order to understand how other sectors, on other economies, cope with the rapid changes due to the supply chain virtualization.

This thesis is organized starting with the theoretical framework that supported the study. After that, the main objectives will be presented and the problem statement and research topics that will lead the study will be discussed. Moreover, the research methodology will be presented followed by the results obtained during the research. Finally, the bibliography that was used will be showed followed by the attachments.
1.1. Theoretical Framework

In this section a general outline of the features that are discussed in this thesis is provided based on theoretical and empirical literature and the reconstruction of the used theoretical concepts. Initially the definitions, correlation and the e-commerce models are presented followed by a characterization of the e-commerce in Brazil. Afterwards, a brief description of each one of the selected “Star companies” is presented representing the three studied sectors. Finally, it is presented the main applicant of this study, the DaVinc3i Project.

1.1.1. Virtualization and the E-commerce

Virtualization can be defined as the creation of a virtual (rather than actual) version of a hardware platform, operating system, storage device, or network resources. (Turban et al., 2008).

In this sense, the e-commerce is a branch of the virtualization process. The definitions of what is the e-commerce and how it’s operated by the parties involved are quite vast. According to Laudon and Traver (2003) the e-commerce could be defined as “The study of digitally enabled commercial transaction between and among organizations and individuals”. Moreover, Varadarajan and Yadav (2002) also mentioned that the e-commerce involves other activities related with the transaction process before, during, and after a business deal.

1.1.2. E-commerce Models.

According to Turban et al (2004) apud Caro (2005) there are eight possible e-commerce models that can be used:

- **Business to Business (B2B)** – the transactions are made between two or more legal entities;
- **Business to Consumer (B2C)** – transactions in which the company is the seller and a natural person is the buyer;
- **Consumer to Business (C2B)** – characterized when the customers proclaim the need for a particular product or service and the companies compete to provide such a product;

- **Consumer to Consumer (C2C)** – Transactions in which a natural person sells a product or service for another natural person;

- **Intrabusiness** - when a company uses the e-commerce internally.

- **Government to Consumer (G2C)** – The government provides services for the consumers or other governments and companies using the e-commerce.

- **Cooperative commerce (c-commerce)** - Business partners, usually in the supply chain, collaborate to each other through electronic methods.

- **Mobile commerce (m-commerce)** – When the e-commerce is used by a wireless connection, usually using a Smartphone or similar.

### 1.1.3. The E-commerce in Brazil

The insertion of the e-commerce in the Brazilian market occurred in the end of the 90’s, and since then has been experiencing an average of 35.5% growth rate in the amount of money billed from 2006 to 2010. This expressively growth is mainly due to the democratization on the internet among the Brazilian population, that have included almost 60% of the current 190 million Brazilians citizens (IBOPE/NILSEN, 2010), and also to the increase of the “group-buying” phenomenon that plays an important role on the current Brazilian e-commerce.

Based on the statistics published by e-bit, a Brazilian research consulting in e-commerce data. The estimative for the e-commerce sales on 2012 are around 13.84 billion US$. The results also showed that out of a population of 190 million inhabitants, 27.4 million Brazilians have already purchased some kind of products using the e-commerce.

Furthermore, the School of Business Administration of Sao Paulo's Getulio Vargas Foundation (FGV), develops an annual survey supervised by Professor Alberto Luiz Albertin, coordinator of the Center for Applied Information Technology (GVcia) and the Program for Excellence in Business Digital Age (NED).
The survey considered 470 companies, of different sizes, various sectors and industries operating in any level in the Brazilian digital market environment. Even though the e-commerce is relatively young in the transactions operated in Brazil, the main results were very positive. According to the research published by FGV, among all the transactions between retailers and consumers on 2011, almost one third of them (33.02%) were operated electronically.

Another interesting fact pointed by the survey, showed that for business matters, the privacy and security, customer relations, customer adoption and strategic alignment were given as the most important benefits in the use of electronic commerce.

According to e-bit’s Marketing and Product Director, Alexandre Umberti, the reasons for the continuous growth of the e-commerce in the Brazilian economy are very clear. He pointed that four million Brazilians had experienced an online transactions, for the first time on 2011. In addition, 61% of these new entrants were categorized in the middle and lower class, showing that online shopping is not only reaching the elite class, but also the growing Brazilian lower class. In this sense, the websites will have to adapt the layout and marketing for these new users.

The products categories that are most commercialized via e-commerce on Brazil in 2010 were Appliances (14%), Books, Magazines and Newspapers Subscriptions (12%), Health, Cosmetics & Medication (12%), Computers (11%), and Electronic (7%).

Moreover, aiming to understand how the companies that have shown a great use of the e-commerce on the Brazilian market are operating and how are the impacts of the online sales channel for than, the previous indicated “Star Companies” are presented by a brief description. The complete characterization of each one of the three companies can be seen on the results chapter of this study.

- **Saraiva.com** (Publishing sector): Founded in 1914, Saraiva is the Brazil's largest bookstore in revenues and operates in the retail market of books, movies, stationery, computer, electronics and music. Saraiva.com.br was a pioneer in the e-commerce in Brazil, and is among the largest companies in the retail sector of the country.
With significant growth in sales by the Internet, (e-commerce), the balance of Saraiva on 2010, with 91 units installed, reached revenues 21.7% higher in the first half of this year, compared to the same period on 2009. The company’s gross revenues totaled R $ 742.3 million during 2010. The website operations on Saraiva.com, represented 36.2% of the total number.

- **Americanas.com** (Retail Sector): Americanas.com was created on 1999, and after only two years have become a leader in sales and profitability in the e-retail sector in Brazil. With over 500,000 products, is largest online company from Latin America, with approximately 10 million customers. The customer base and product offerings and services have grown substantially in recent years, always remaining the focus on customer satisfaction.

- **Vivo** (Telecommunication sector): Vivo is the largest mobile phone company in Brazil, it was founded on 2003. Today, Vivo is present in all Brazilian states, having the largest market share on the mobile phone market in Brazil. The operator is focused in a continuous search in technology as a form of growth. In this sense, invests a lot on the marketing and in the e-commerce operations. Only on the second semester of 2011, the net profit from VIVO reached $ 1.14 billion, up 30% compared to same period in 2010. The recent evolution of the company was possible mainly by the value added services revenue growth, greater adherence to the 3G internet plans, with strong demand for Smartphone use.

1.1.4. **The DaVinc3i project**

This study will serve as an input to the DaVinc3i project - Dutch Agricultural Virtualized International Network with Coordination, Consolidation, Collaboration and Information Availability which is carried out by WUR, Royal FloraHolland, Vrije Universiteit Amsterdam, Technische Universiteit Eindhoven and VGB - Vereniging van Groothandelaren in Bloemisterijproducten under the wings of the Dutch Institute for
advanced Logistics (DINALOG). A brief description of The DaVinc3i project is presented.

According to DINALOG, 2011, the project objective is to strengthen the international leading competitive position of the Dutch horticulture sector in a global, virtualized trade network by researching (1) the opportunities for new coordination, consolidation and collaboration concepts in extended international tradeparc networks, and (2) the possibilities for making chain information directly and real-time available and usable to support decision making of all partners in the horticultural network. This proposal links to the Transport Hubs in Control program: it develops new network coordination concepts and building blocks for a voluntary information infrastructure and corresponding IT architecture, resulting in an improved use of the logistics infrastructure.

Five work packages were designed for the DaVinc3i project for specific researches and further investigation as showed bellow:

- (WP1) Scenarios for an international virtualized horticultural trade world
- (WP2) Design of value-added logistics services
- (WP3) Virtual information exchange and transparency
- (WP4) Business models for network coordination
- (WP5) Integration, implementation and knowledge dissemination

These study will be part of the WP1, developing a benchmarking study about the Brazilian virtualized trade markets by analyzing the development and growth of the e-commerce and the impacts of the consumer behavior on the virtualized supply chain.

During the project, the findings of all packages are integrated resulting in innovative ideas and validated concepts & tools for handling fresh products in virtual trade networks and challenging demo-projects as well as high-level scientific publications.
2. Objectives

This thesis aims to characterize and describe the current situation of the Brazilian supply chain virtualization process analyzing the effects of the consumer behavior on the three selected sectors. Moreover, the study will illustrate the adjustments on these sectors - Retail, Telecommunications and the Publishing sectors, regarding the changes on the consumer behavior with the rapid growth of the e-commerce inside the Brazilian market.

More specifically, it describes whether the consumers are satisfied with the web-purchasing process and what they might be considering for the future on the e-commerce. The steps that are taken by a Brazilian consumer before acquiring a product by the internet will also be an important topic on this study, since it can explain the impacts involving the consumer behavior buying process and the results that it would bring for the supply chain and vice-versa.

In order to have a good view of the real state of the question, the study will focus on three sectors that have experienced an expressive growth of sales by internet in the last years. For each one of these sectors, a “Star Company” that was able to take competitive advantage of the growth of the e-commerce was selected.

3. Problem Statement and research topics

This thesis aims to develop an outside in benchmark focusing on the effects of the consumer behavior on the virtualization process of the three selected “Star Companies”. Therefore, the specific attributes regarding the behavior of the consumers when shopping by the internet will be also discussed helping understanding the changes in the supply chain and the future perspectives for the e-commerce on Brazil.
More precisely stating, the research questions that will lead the project are:

- What are the current developments and trends for the e-commerce within the selected sectors?
- Which are the main differences on the online buying process and which steps generally precede an online purchase?
- Which effects does virtualization brings on the supply chain and how the selected companies deal with it?
- What are the benefits of buying by the internet and on a consumer point of view what should be improved?
- What lessons can be learned from the “star” companies and how it could be used by the Dutch horticultural sector?

Moreover, in order to have a guideline to be followed, assuring consistency between the several benchmarks that will be developed on other countries, some specific topics will also be included on this paper for the case of Brazilian study.

An economic snapshot of Brazil will be showed, expressing the Macro-economic development of the economy, the development of the GDP and other economics measures regarding consumer expenditures. A social overview of the Brazilian current reality will be part of the study as well.

It will also analyze the development, growth and penetration of the internet and online purchasing by the Brazilians consumers, showing the results from the last years. As well as a cultural descriptions of the most important celebrations for the Brazilians and how do they celebrate these special dates.
4. Research Methodology

The research methodology that will be used for this thesis, involves desk research based on the different handbooks and articles that may provide useful insights into the e-commerce and the consumer behavior involving the development of the sales by the internet in Brazil. Newspapers’ articles, companies’ websites, governmental websites and public data available on the internet will be collected and analyzed in this research as well. This information may provide a strong basis to assess the current situation of the sectors that will lead the benchmark study and to answer the research questions. Being able to analyze the performance, trends for the future and the current situations on the Retail, Telecommunication and Publishing sectors.

Moreover, interviews with the company’s experts on the e-commerce are included in order to have a clear and closer view of the current state of the e-commerce and the internet sales growth and perspectives for the next years that would also have a strong contribution for this study.

The companies that were interviewed were VIVO, by a telephone conversation with Mr. André Cortella the marketing consultant from the company and Mr. Adilson Rielo from Saraiva Publisher and Book Stores consumer relationship.

In addition, on May 15th of the current year, a meeting was held on Getúlio Vargas Foundation on São Paulo city with Professor Alberto Luiz Albertin with the aim of discussing the actual state of the e-commerce in Brazil and also future perspectives for the web market bringing important considerations and market know how on this e-commerce study. Is presented bellow a brief description of Prof. Albertin performance on the academy:

- Bachelor of Business Administration - Associated Colleges of São Paulo.
- Master in Business Administration – University of São Paulo – Faculty of Economy, Administration and Accounting USP.
- PhD in Business Administration - University of São Paulo – Faculty of Economy, Administration and Accounting USP.

Prof. Albertin is dedicated to the areas of Information Technology (IT), Project Management, and Business in the Digital Age studying. Working as a consultant and
teaching the various aspects of administration on information technology. Worked for several years in national and multinational companies in the IT area and is the author of several books on Management of Information Technology (Atlas, 3rd edition, 1999) and E-commerce (Atlas, 3rd edition, 1999) besides the innumerable research studies, and articles on IT and Management projects, been awarded for his studies. Moreover, Prof. Albertin is a newspaper columnist in business administration and information technology. Currently, he is the Coordinator of the Center for Applied Computer Science - CIA - and the Program for Excellence in Business in the Digital Age (NED), FGV-EAESP.

Another part of this study, involved a questionnaire application that had 115 respondents, majorly represented by bachelor’s students from University of São Paulo, between 20-30 years old. The questionnaire results were used as an extra input for the desk research in order to analyze which sales channel are most used on the internet and also the steps that are taken before purchasing by the e-commerce.

Regarding the rates and values that forms the figures on this study, it is important to mention that in some cases the actual numbers were presented on the Brazilian currency REAIS. On those cases the results were converted from the Brazilian Currency Reais (R$) to American Dollars using the average exchange rate of June of each current year and are expressed in billions of American Dollar (US$).

5. Results

5.1. PEST Analysis of the Brazilian market.

In order to analyze the macro-environmental scenario that the three selected “Star Companies” have been facing inside the Brazilian economy, the PEST Analysis was applied on this study. PEST is a simple but important and widely-used framework that categorizes macro-environmental influences (Kotter and Schlesinger, 1997), helping to understand the big picture of the Political, Economic, Socio-Cultural and Technological environment in which a company is operating. Applying to this study, the actual Brazilian scenario will be emphasized. The results of this analysis can be used to
explore the opportunities and to make estimated plans for threats during the preparation of a Business and strategic plan (Byars, 1991).

5.1.1. Political Factors

Refer to how and to what degree the government intervenes in the economy and how the company’s performance is influenced by the government’s actions. Some of the issues that should be taken into account are government stability, taxation policy, foreign trade regulations and social welfare policies.

Applying to this case, the country of reference is Brazil. A South-American Presidential Federal Republic with three independent powers, Legislative, Judiciary and Executive. The democracy has been established in 1985 after a 22 years long dictatorial government. It can be said that although the democracy is still very young in the country, the government stability is relatively high, since the transition between opposition and situation in 2002 was reasonably peaceful and mutually accepted.

The Brazilian tax system is composed of 61 federal, state and municipal different taxations, contributing for the complexity of the regulations and tributes. According to the World Bank, Brazil was ranked in 145º position between the countries that have the higher tax burden relative to GDP. On total 180 countries were involved in this survey.

However, according to the Federation of the industries of the State of São Paulo (Fiesp), instead of having incentives from the government, when expanding their facilities, the industries are obliged to pay tributary costs of 24.3% of the total costs of the project. This high taxation policy of Brazil explains the low rates of investments in correlation with the GDP. On 2010 the total investments in Brazil reached 19.4% of the GDP, while countries like China and India had this correlation around 40% and 30% respectively.

Brazil is part of the Mercosul, an Economic and Political agreement defined as a Common Market. It is composed by 4 countries, which are: Brazil, Argentina, Paraguayan and Uruguay. Between these countries, there are no import and export tariffs, and also all of them have a common external tariff, which regards to trade with countries outside of the block, facilitating the exports of products for other countries or economic blocks, as the European Union.
5.1.2. Economic Factors

The last decade was marked by intense changes in the Brazilian economy and society. From a slightly dynamic economy, with growth rates below the world average, Brazil had joined the ranks of the most promises countries in the world. Together with Russia, India and China, the so called BRIC countries are considered on the actual moment that stands out on the world stage as rapidly developing economies. Moreover, the Brazilian economic growth promoted social inclusion, social and regional disparities reductions.

According to the Brazilian Department of the treasury, along the decade of 2000, the Brazilian economy average growth has jumped from an annual average of 2.5% to 4.5%. This development was mainly due to a new economic policy that favored job creation, internal investments income distribution. The economy has growth generating significant primary surpluses of public accounts and inflation controlled by the system goals. Instead of using debt to grow, Brazil began to expand with debt reduction.

The international financial crisis of 2008 temporarily halted the economical growth trajectory. The more severe impacts resulted in the devaluation of the real against the U.S. dollar and deteriorating economic activity indicators and employment, were particularly severe during the last quarter of 2008 and first quarter of 2009.

Nevertheless, Brazil was one of the last countries to enter the crisis and one of the first to get out of it. Policies for growth acceleration and strong job creation, combined with the appreciation of the minimum wage and internal investments on the country had caused the crisis emerging for Brazil.

In this positive actual scenario for the country, it will be presented bellow some macro-economic indicators that emphasize the proper time experienced by the country.

5.1.2.1. Gross Domestic Product

The Gross Domestic Product (GDP) represents the sum of gross value added by all inhabitant producers in the economy plus any product taxes and minus any subsidies not included in the value of the product (World Bank, 2012)
The figure below indicates the GDP development of Brazil in current U.S$ dollars, from 2002 to 2010.

![Brazilian GDP Growth (2002 – 2011)](image)

The graphic presented above indicates the expressive growth of the Brazilian GDP on the last decade and also the good prospects for continued growth.

In 2010, Brazil's GDP grew 7.5% in comparison to 2009, reaching US$ 2.09 trillion according to the World Bank statics, the best performance since 1986. The recent trajectory shows the sustainability of the activity level in the Brazilian economy.

According to the estimative of the Brazilian Department of the treasury, for the period 2011-2014, it is estimated that the economic return to growing levels between 5% and 6.5%.

5.1.2.2. **Gross Domestic Product per Capita**

The Gross Domestic Product per capita can be defined as the value of all final goods and services produced within a nation, in a given year, divided by the average (or mid-year) population for the same year (World Bank, 2012). The gross domestic product (GDP) is one of the procedures to measure the national income and output for the economy. The Constant Prices refers to a method for valuing the price over time, without that metric changing due to inflation or deflation.
Therefore, the figure below illustrates the Gross Domestic Product per Capita for Brazil between 2000 and 2010. The estimative showed by the graphic are adjusted for inflation and are represented in USS Constant Prices, a method for valuing the price over time, without metric changing due to inflation or deflation.

![Brazilian GDP per Capita (2000-2010)](image)

**Figure 2: Brazilian GDP per Capita (2000-2010)**

### 5.1.2.3. Social Classes in Brazil

Since 2002, about 25 million Brazilians were able to ascend to the middle part of the social pyramid. In 2010, despite the international crisis, 103 million Brazilians were categorized on the C class that has perspectives for continued growth in the coming years. Another important fact to be pointed is the expressive reduction of classes D and E. (Brazilian Department of the treasury, 2012).

According to the Brazilian Institute of Geography and Statistics (IBGE), the classes are sorted according to the number of minimum wages (MW), on total family income and are represented by letters: A (above 20 MW), B (between 10 and 20 MW), C (between 4 and 10 MW), D (between 2 and 4 MW) and E (up to 2 MW).

The figure illustrates the evolution the social classes in Brazil, comparing 2003, 2009 and the estimative for 2014.
Moreover, according to a research developed by a e-commerce research company in Brazil, WebShoppers.com, 61% of the e-consumers are allocated on the class C. In this sense, the perspectives of continued growth on the use of e-commerce on this class are considerably high.

5.1.2.4. Income distribution levels using the Gini coefficient

The Gini coefficient measures the inequality among the proportion of the total income of the population and the total cumulatively earned by the population.

The distribution level can vary from 0 to 1. A low Gini coefficient indicates a more equal distribution, with 0 corresponding to complete equality. The higher is the Gini coefficients, the more unequal distribution, with 1 corresponding to complete inequality.

Therefore, it is presented below the income distribution levels from Brazil measured by the Gini coefficient.

Figure 3: Social Classes evolution in Brazil.
The figure presented above indicates that the inequality of personal income has been falling steadily in recent years. Comparing 2002 to the last data from 2009, there was an expressive reduction of 8.5% on the Gini coefficient. The economic growth of the country and the governmental policies of enhancing the minimum wage and also the income distribution programs contribute to reducing inequality.

Although, even with the income distribution constantly improvement in Brazil, it is still far away from developed countries like Netherlands from example. According to the World Bank the Dutch Gini Coefficient on 2007 was 0.31. The last data from Brazil indicates that on 2009, this coefficient for the country was 0.54, showing a great distance to most of the European countries.

5.1.2.5. Unemployment Rates in Brazil

Brazil is an effective member of the International Labor Organization (ILO) and is adapted to the resolutions of this institution to translate its best reality. In this sense, the unemployment rate is presented by the figure bellow highlighting the percentage of the economic active population that do not have a job.
The unemployment rates in Brazil had reached one of the lowest percentages on 2010 achieving only 7% of the economic active population, and still declining. According the Brazilian Institute of Geography and Statistics (IBGE), the perspectives for 2012 are to have only 6% of the economic active population unemployed.

5.1.2.6. Consumer expenditures

On the beginning of 2012 the Brazilian Institute of Geography and Statistics (IBGE) released a study indicating on what matters the Brazilian consumers spend their income. The projections indicate that the Brazilian families expenditure are between those that most grow worldwide.

Moreover, a quite important transformation of Brazilian consumption indicated by IBGE, regards the greater search for more add valued products with higher quality.

The figure bellow illustrates the Brazilian consumer expenditures relative to their overall income.
### 5.1.3. Socio-Cultural and demographic factors

In the social factors cultural, social and demographic aspects can be included. Some descriptions will be made analyzing the age distribution of the population comparing the population pyramid evolution along the last years, the population growth rate and the geographical distribution along the country.

Also the literacy rates and the rate of the urbanization from Brazil will be discussed in order to provide useful information about the demands and perspectives for the Brazilian population.

Brazil is currently the 5th most populated country in the world, only behind China, India, USA and Indonesia. The latest revision of the population projection made by the Brazilian Institute of Geography and Statistics (IBGE, 2012) on 2010, estimated the total Brazilian population was around 193,252,604 inhabitants.

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#### Brazilian Consumers Expenditures

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>35.9%</td>
</tr>
<tr>
<td>Food</td>
<td>19.8%</td>
</tr>
<tr>
<td>Transport</td>
<td>19.6%</td>
</tr>
<tr>
<td>Health</td>
<td>7.2%</td>
</tr>
<tr>
<td>Clothing</td>
<td>5.5%</td>
</tr>
<tr>
<td>Education</td>
<td>3%</td>
</tr>
<tr>
<td>Sundry</td>
<td>2.9%</td>
</tr>
<tr>
<td>Personal Care</td>
<td>2.6%</td>
</tr>
<tr>
<td>Recreation</td>
<td>2%</td>
</tr>
<tr>
<td>Tobacco</td>
<td>0.5%</td>
</tr>
</tbody>
</table>


Figure 6: Brazilian Consumers Expenditures
The Brazilian population is unequally distributed along the extensive Brazilian territory, with 8.5 million square kilometers. Presenting overpopulated urban areas as São Paulo and Rio de Janeiro, and the north-east portion of the country with very low population density. The irregularity of the Brazilian population distribution is more evident when some population data from states or regions are compared. Only the state of Sao Paulo concentrates 41.2 million people being superior to the population Central-West and North regions together. The map bellow shows this unequally distribution around the country.

![Geographical Population distribution](image)

*Figure 7: Geographical Population distribution.*

The population growth of recent decades in Brazil is mainly due to the vegetative growth, in other words, it means that more people are born than died. During the 1940-1950’s a demographic explosion occurred due to the Second World War on Europe that caused an intensive migration to Brazil, lasting until the middle of the last century. In 1950 the population was approximately 52 million compared with 2010, the country has increased by more than 140 million people. The picture bellow illustrated the growth of the Brazilian population from 1950-2010.
Moreover, the rate between men and women, according to the Brazilian Institute of Geography and Statistics (IBGE), is 0.96. In other words, for every group of 96 men, you will find a group of 100 women. Therefore, the gender balance is quite close. Statistically more men than women are born. However, according to the IBGE, the main reason for the phenomenon is the high rate of violent death in Brazil, car accidents and drug use that predominantly affects the male population.

In terms of population growth, it can be said that in the past 20 years, with a more urbanized population, more access to the contraceptive techniques and also better literacy rates, the growth trend has decreased, but it is still high, especially when compared to developed countries. According to the last Census on 2010, the average annual growth of the population was 1.17%, on 2000 the rate between the number of born and death was 1.64%.

On 2010 the average number of children per women on Brazil was 1.86, comparing to sixty years ago, when this rate was about 6.1 children, the total fertility rates had improved significantly. The graphic below shows the Total Fertility Rate on Brazil between 1940 and 2010 and also the difference in number of children between those years reaching 4.3 children.
The country has more than 20 metropolitan areas with more than 1 million inhabitants, and most of them are located in the South-east, South and North-east regions. More than 73% of the population is catholic, making the country the largest “catholic country” in the world.

Having on mind that the state of São Paulo is the most populated state of the country and also the one that holds the majority industries and universities, this study will be mostly focused on the consumer behavior of consumers that use the e-commerce on the state of São Paulo. Moreover, the selected “Star” companies of this study have their headquarter office on São Paulo State.

**5.1.3.1. Population Pyramid**

In order to have a clear view of the structure by age and sex of the Brazilian population and also to understand the growth perspectives for the future, four different Population Pyramids - 2000, 2005, 2010 and an estimation for 2020, will be presented and analyzed presenting the age structure of the population.

The two Population Pyramids presented bellow show an age structure diagram for the Brazilian citizens on 2000 and 2005.
Both of the Pyramids, from 2000 and 2005, show that the majority of the population was represented by young people between 15 and 25 years old. The broad base indicates a high proportion of children, a rapid rate of population growth, and a low proportion of older people.

Nevertheless, according to the 2010 Census data, released by the IBGE (Brazilian Institute of Geography and Statistics), in the next 40 years the Brazilian age pyramid would be similar to the actual age pyramid of the developed countries, as France for example. Brazil will have lower birth rate and higher life expectancy.

According to the IBGE, the average annual population growth was only 1.17% in the last ten years, compared to 1.64% in the previous decade. In 60 years, was 2.89%. Showing that the population will continue to grow in the next years but with lower rates.

Thinking about the age pyramid for 2020, the country must begin to prepare for the changes that are already starting on 2010. Since the number of older people that will work more years will increase and the number of young contributors will be lower, the solvency of the pension system will be threatened. In the other hand, the country will be benefited by the "demographic bonus", characterized by the greater presence of adults in society.

Moreover, reducing the number of children should enable the country to improve access and quality of education without significantly increasing investments. There will also be
changes in the market of products and services. With more adults and elderly, are expected to change in health services, construction and even leisure. Changing the consumer behavior and also elevating the expectancy of this older consumer regarding the quality and availability of information on the subject of e-commerce and internet sales. In other words, the companies that are willing to use the e-commerce as a purchasing tool will have to adapt to changing consumer needs of this population.

The pyramid presented below represents 2010, showing how is the actual age distribution of the Brazilian population. An increase of the concentration of the population between 25-29 years old and also a greater percentage of elderly people in the population.

![Population Pyramid - 2010](image)

**Figure 12: Population Pyramid - 2010.**

Also a forecast of how the age distribution of the Brazilian population would look like on 2020 is showed below. It can be deducted that the number of old people will have a great increase since the life expectancy tend to be higher. In this sense, the consumers age that use the internet to purchase products tend to be higher forcing the companies to adjust to this new patterns.
5.1.3.2. Rate of Urbanization

In 1960, only 45.1% of Brazilians lived in urban areas, in 2010, the population percentage living on the cities were 84.3%. In the last decade, the growth rate of urbanization was 3.8% (IBGE). The graphic below shows the development of the population growth that lives on the Brazilian cities.

In the 60s, Brazil was an agricultural country, with an urbanization rate of only 45.1%. In 1980, 67.6% of the total population already lived in cities. From 1990 on, the number of inhabitants living on the cities observed a continued growth due to the big
number of industries that settled on the city areas and also the difficulties regarding credit for the agriculture.

The rate of urbanization is represented by the ratio between the urban population and the total population. In Brazil, this ratio is relatively high, 84.4% of Brazilians live in urban areas, being the 26th country with the highest rate of urbanization in a set of 192 countries. Holland is in the 31st position on this rank with a rate of urbanization of 82.9%.

This higher rate of urbanization also contributes to an easier access of internet and web-facilities, increasing the number of web-purchases and encouraging the companies on investing in this segment, since the perspectives of growth are relatively high.

5.1.3.3. Literacy Rates

According to the National Household Sample Survey (PNAD) of the Brazilian Institute of Geography and Statistics (IBGE), among people aged 15 or older the illiteracy rate has been improving significantly over the past years. On 2000, the illiteracy rate was 13.63%, falling to 11.5% in 2004 and on 2010 the rate was 9.6%, approximately 14 million people.

The goal of Brazil, settled on an agreement the United Nations Educational, Scientific and Cultural Organization (UNESCO) on 2010, is to reach the 6.7% rate of illiteracy in 2015.

The national illiteracy rate for teens and young adults between 15 and 24 years reached only 2.5% in 2010. Inside this group of people, the highest rate was 4.9% in the Northeast, where 502,124 people between 15-24 years old said they did not know how to read and write, compared to 1.1% in the South and 1.5% in the Southeast. The most serious situation was observed in municipalities with up to 10 000 inhabitants in the Northeast (7.2%), while in cities with more than 500 000 inhabitants in the South, the rate was 0.7%. The comparison with 2000 shows that there was growth of literacy of the people in this age group, from 94.2% to 97.5% in 2010, reaching values close to the developed countries.
5.1.3.4. Important events celebrated in Brazil

In addition to the socio-cultural overview of Brazil, some special occasion and celebrations will be further discussed to give a closer view on the Brazilian culture and behaviors according to some specific occasions as Birth, Birthday, wedding, death and religious day.

- **Birth**: In Brazil, in line with the majority of the western civilization traditions, the birth of a new child represents an important and very happy accusation for the parents, relatives and closer friends. It is common that after some weeks of the birth, when the child and the mother are already on their houses, to have relatives and close friends coming over, usually bringing gifts and souvenirs for the new member of the family. Baby clothes, toys and bed linen are the most common ways to gift a birth.

- **Birthday**: The birthday in Brazil is celebrated annually in the same day in which the particular event of birth had occurred. It is common to make a party, inviting close relatives and friends, and everyone sing the birthday song "Happy Birthday". Usually the person or the family, offers to the guests different kinds of snacks, sodas, and other types of drinks and after singing the “Happy Birthday” song, the person that is celebrating his/her birthday cuts the cake and offers to the guests some traditional Brazilian candies made of condense milk and chocolate called “brigadeiro” and “Beijinho”. It is quite common for those that are invited to a birthday to bring a gift or souvenir depending on the person age and closeness.

- **Wedding**: The marriage in Brazil is formed between two people through the recognition of the government, religion and society presupposing a formal intimacy and cohabitation. According to the Brazilian law, the marriage is defined as a contract between and can have different forms regarding goods sharing between the couple. In Brazil, a homosexual civil union was recognized by the Supreme Court for the first time on 2011. Since then, more homosexual couples had achieved their rights to get married according to the law.
A wedding is often initiated by a celebration, which can be conducted by a minister (priest, rabbi, pastor), by a person representing the law, or by an individual who enjoys the confidence of two persons wishing to join.

After the marriage, the guests are usually invited to a party that is hold by the couple that got married. The guests presents the bride and groom with gifts that, on most of the cases, are to help forming the furniture and domestic utensils for the couple’s new house.

- **Death:** As many west civilizations, the Brazilian culture faces the natural process of death, as something extremely painful, very sad and dark. Since most of the population is considered catholic, the beliefs regarding heaven and hell are quite strong. The figure of a priest praying during the burial of the death person is quite common and serves a way to comfort the family and friends that have lost a loved one. The burial and the cemetery are decorated with flowers and people tend to wear black as a form of respect for the sad moment.

- **Religious Day:** There are three national religious holidays in Brazil. All of them are part of the Catholic Church holidays. They are specified by federal law as a holiday, so people do not have to work. However, state and city religious holidays can vary according to the region and culture. The national religious holidays celebrated in Brazil are represented bellow.

  - **October 12th - Patron Saint of Brazil “Nossa Senhora Aparecida” - The Blessed Virgin Mary.** During this holiday a lot of people go to a small city on São Paulo state called Aparecida do Norte, where there is one the biggest country’s Cathedral, to pray for the National Patron Saint.

  - **November 2nd – All souls day or the Day of the Dead.** It is common for the Catholics to pray for those that are already dead and also bring flowers and visit the graves of a loved one on the cemetery.
- December 25th – Christmas - Although it is traditionally a Christian holiday, Christmas is widely celebrated by many non-Christians in Brazil. Typical modern customs of this holiday includes the exchange of gifts and cards, Christmas dinner, Christmas carols, church festivals and a special meal with the family where the main dish is usually turkey. The common decorations includes the Christmas trees, red flowers and also the Santa Klauss.

5.1.4. Technological Factors.

5.1.4.1. Internet Growth in Brazil.

According to a study developed by the Interactive Advertising Bureau (IAB) association Brazil, the Internet is already the most consumed media in the country today, reaching more than 80 million internet users and growing day after day.

The survey also states that more than 40% of respondents spend at least two hours per day surfing the internet, while only 25% spend the same time watching TV.

The figured showed bellow presents the visible increase of internet users in Brazil. The numbers showed on the graphic represents the millions of Brazilian internet users on different years.

![Internet Growth in Brazil](image_url)

*Figure 15: Growth of Internet Users in Brazil.*
According to the last IBOPE data from 2010, the most popular broadband speed in the country is between 512 Kbps and 2 Mbps, used by 47.8% of customers. Followed by 21.3% of users with broadband speed from 2 Mbps to 8 Mbps, 16.9% still using broadband ranging from 128 Kbps to 512 Kbps and only 8.7% access the web through the superior network with speeds exceeding 8 Mbps.

5.1.4.2. Internet Penetration Rate

Moreover, the penetration rate of the internet on the Brazilian population also observes an expressive and continued growth along the years. The last data from 2011 indicates that 60% of Brazilians have the possibility of accessing the internet. The evolution on the internet penetration along the years in Brazil is showed by the figure.

![Penetration Rate of Internet in Brazil](image.png)


Figure 16: Penetration Rate of Internet.

According to the F/Radar study developed by F/Nazca, 38% of the Brazilian inhabitants over 16 years old, have access to the web daily, 10% from four to six times per week, 21% two to three times per week, 18% once a week.

Nevertheless, the penetration rates still quite distant from the developed countries like USA with 78.3% and the Netherlands that hold the 8th place on the highest penetration rates of internet worldwide, with 89.5% of the Dutch citizens having internet access. The costs of computer and broadband internet still the biggest barrier for a great portion of the population.
5.1.4.3. Mobile telecom Growth and penetration rates

Just over 20 years ago, the first cell phone arrived on the Brazilian market. Two decades of intensive changes and new ways of communicating. On 2012, there are more mobile subscribers than people in Brazil. The mobile telecommunications subscriptions are around 220.4 million and the population near 196 million. (Nielsen Online; World Bank, July 2012).

The figure bellow illustrates the evident growth of the Mobile telecom in Brazil from 2005 to 2012.

![Mobile Telecom Growth in Brazil - Millions of Mobile Subscribers (2005 - 2012)](image)

Prepared by the author.

Figure 17: Mobile Telecom Growth.

According to the Brazilian regulatory agency of telecommunications (ANATEL), on 2010, the mobile penetration in Latin American was lead by Brazil with 92% of mobile penetration, followed by Colombia with 88 %, Chile 75 %, Argentina 72% and Mexico with 63%. On 2012, the penetration rates on Brazil are around 96%.
5.1.4.4. Mobile Internet in Brazil

Based on the last data available from ANATEL/TELECO, in June 2011, 26.6 million Brazilians accessed the Web from a mobile device, representing 12.7 million more or almost two times the web access from a mobile device on the same time on 2010.

The mobile Internet in Brazil represents a great potential. The data from 2011 indicated that there were already three times more mobile phones than PCs and nearly twice as many 3G connections as fixed broadband connections. Analyzing the numbers the probability of consumers to have their first experience of the Web over a mobile phone, rather than a PC will not take too much time to occur in Brazil.

The figure bellow indicates in millions the number of 3G devices, showing in red data terminal devices as 3G external modems for example, and in blue the Smartphone with 3G technology.

Figure 18: Mobile Internet Growth in Brazil.

About 50% of Brazilian cities are already served by the mobile internet service, representing an increase of 23.4% in coverage from 2010 to 2011 (Teleco/ Huawei, 2012). According to Huawei and Teléco researches, the total coverage area of 3G networks is considered to reach about 84% of the Brazilian population.
According to ANATEL (National Telecommunications Agency) the mobile Internet adoption in Brazil is higher than the world average. The growth of mobile broadband in the world was 26.2%. The projection for growth of the service in Brazil for 2012 is optimistic indicating that the access to mobile internet can reach the 73 million mark. For 2014, World Cup year in Brazil, with higher demand for the service the mobile internet access can reach 124 million.

5.1.4.5. Penetration rate and growth online banking

With a higher broadband access associated with investments in security the use of internet banking in Brazil tends to have a continued growth. The government programs facilitating internet access will boost Internet use for all classes in the coming years creating a new class of consumers. In this sense, the greater development of security systems, a more attractive and flexible platform are necessary for a sustainable growth.

According to the Brazilian Banks Federation (FEBRABAN) on its last research about internet banking in Brazil from 2011, the country has already a level of penetration of internet banking next the developed countries. On 201, the Brazilian penetration rate was around 46%, while countries like USA presented 54% and Germany 50% of penetration rate of internet baking.

The evolution of the penetration rate of internet banking in Brazil between 2006 and 2011 is showed by the figure bellow. The numbers represents the percentage of bank accounts with Internet Banking on Active Accounts. Comparing 2006 to 2011 the positive variation reached 9% of extra internet penetration.

Figure 19: Internet Banking Penetration.
Moreover, the evolution of the number of bank accounts with internet banking in Brazil presents a clear growth tendency. Between 2010 and 2011 the growth reached 11% (FEBRABAN, 2012). The tendency is to keep the growth tendency since the number of Smartphone and internet access on the country is growing significantly.

The graphic highlights the evolution of bank account with internet baking in Brazil between 2002 and 2011. The number represents millions of bank accounts.

Bank Accounts with Internet Banking
(in millions 2002-2011)

[Graph showing the number of bank accounts with internet banking from 2002 to 2011]

Source: Brazilian Banks Federation, 2012.
Prepared by the author.

Figure 20: Bank Accounts with Internet Banking Growth.

In addition, the FEBRABAN made a projection for the coming years, presenting the expected development of internet banking and mobile banking. The graphic XX shows that the while the internet banking tend to have a linear growth, the expansion of mobile banking will be much more expressive almost reaching the internet banking levels.

Projection for Internet and Mobile Banking
(In millions of bank accounts)

[Graph showing the projected number of bank accounts with internet and mobile banking from 2000 to 2018]

Source: Brazilian Banks Federation, 2012.
Prepared by the author.

Figure 21: Future Projection for Internet and Online Banking Growth.
5.1.5. E-commerce Sales in Brazil

According to the second edition of the E-Commerce Meeting hold by the Commercial Association of Sao Paulo (ACSP) on the final of the first quarter of 2012, the e-commerce in Brazil foresees revenues of R$ 23.4 billion in 2012, what represent something like US$ 11.3, expecting 25% growth compared to 2011. The estimative is quite tangible when observing the evident growth year after year on the e-commerce sales.

The figure presents this growth evolution from 2007 until the foreseeing for 2012 on the e-commerce sales in Brazil. The numbers are presented billions of the US$ American dollars.

![E-commerce Sales in Brazil](image)

*Figure 22: E-commerce Sales in Brazil.*

5.1.6. Collective online Purchasing in Brazil

Introduced in Brazil on 2010 the phenomenon of the collective online purchasing in Brazil took few months to become popular and attracting a lot of consumers on the country. Since then, the collective online purchasing web sites have multiplied. Today
the most common web sites of this sector in Brazil are PeixeUrbano, Groupon, Clickon, Clubeurbano, Zipme among others.

According to the e-bit company information the sales in on collective online purchasing web sites in Brazil were up to $ 200 million in 2011.

The proposal of collective online purchasing is quite simple: a group of consumers that are interested on a product or service make the choice of buying that by the proper web sites. After reaching the minimum quota, the user receives the coupon discount and take it to the store or site that offered the discounts.

The growing adoption of social media and the easiness of information exchange contributed to the success of this phenomenon of e-commerce making this business model is a very promising sector, being one extra tool to be explored on the e-commerce.

5.1.7. Sector level descriptions

It is presented below the three selected sector description and the characterization of the “Star Companies” that represents each sector.

5.1.7.1. Retail Sector – “Star Company” Americanas.com

It is understood by retail " The process of selling products and services to meet the personal need of the final consumer” (Parente, 2000, p. 22). In this sense, The Retail sector has assumed a substantial importance in the Brazilian market and also in the world.

The technological innovations have changed the processes and business interactions in many ways and in different sectors, including in the retail sector. The consumers that were used to shop in a traditional way have the possibility to compare products and prices on different stores in the same time. These fast accesses to information enhance the consumer to ask for better quality obtaining a great bargaining power on the purchasing process.
In this sense, the major retail companies operating in Brazil have already entered on the e-commerce, using the Internet as its single channel, the so called Pureplayers, or as a multichannel one, as the “Star Company” Americanas.com for example, that operates both on the physical and on the online retail sector. However, according to Make Gaston, CEO Braspag CEO, while multichannel retailers represented the majority of the new entrants in e-commerce in 2011, it is expected to reverse this logic over the years.

The online retail is one of the most important tools today on the retail market and according to a research held by A.T. Kearney on June 2012, the online retail sector might experience a 12% annual growth for the next five years.

**Online Retail Sector Size and Turnover**

The Index of online retail (VOL) is an indicator of the online retail sector from Brazil that is conducted quarterly by the E-consulting Corporation. The indicator consists of the sum of the transaction volumes of automobiles, tourism and consumer products through online stores and auctions on the internet.

The indicator specifically for consumer goods (durable and nondurable), is composed of items such as appliances, electronics, CDs, DVDs, Books, Telephone Equipment, Cosmetics, Toys and Clothing, among others. According to the last data available, on 2010 the turnover on the sector will reach R$ 10.7 billion, something like US$ 5.3 billion, representing an increase of 16.3% in comparison to 2009.

The figure highlights the turnover evolution of the online retail sector between 2002 and 2010. The results were converted from the Brazilian Currency Reais (R$) to American Dollars using the average exchange rate of June of each current year and are expressed in billions of American Dollar (US$).

![Online Retail Turnover Growth](image)
Companies and Market Share on the Retail Sector

The rivalry between the companies inside the online retail sector is very strong and intense. According to a survey hold by Serasa Experian Hitwise based on 2010 data, the leadership of the Brazilian online retail sector and also of the Brazilian overall e-commerce is the experienced group **B2W**. The group controls the companies Submarino.com, Shoptime and also Americanas.com, which was selected as the “Star Company” within the sector. All the companies together forming **B2W**, holds 48.44% of the market share of visits among online retailers.

On second place, with 22.25% of the market share, the group **Nova PontoCom**, composed by the companies Casas Bahia, Extra e Ponto Frio. All these companies adopted the “Bricks and Clicks” strategy. This strategy was proposed by Kellogg Case Simulation Team, under the sponsorship of Professor Mohan Sawhney and basically represent a strategy by which the company integrates both offline (bricks) and online (clicks) presences.

Apart from the fight among the two giants, the diversification of business is another important aspect of the online retail sector. The ideas of Brazilians entrepreneurs and investments of foreign investor have changed the sector’s dynamics. The opening of a growth number small companies in the sector, called Startups, are innovating the segment and exploring previously underserved niches, such as fashion, beauty, furniture, babies, crafts and sustainability. According to the Serasa Experian Hitwise survey, on 2010, Brazil had more than ten thousand sites of its kind.

The figure shows the market share of the online retail sector, presenting the most important companies and also the groups B2W and Nova PontoCom market share.
In addition, it is presented by the figure below, the evolution on the total gross revenues from the two biggest companies on the online retail sector. While the still market leader B2W presents small growth rates or even negative ones like on 2009, the second company Nova PontoCom shows an evident and continued growth over the years.

Figure 24: Market Share of Online Retail Companies.

Figure 25: Online Retail companies Gross Revenues.
Furthermore, B2W, through its brands and operations, registered under the consolidated operational point of view, according to international standards financial report ("IFRS"), a growth of 12.1% in net sales in 2010 totaling US$ 2.29 billion. The EBITDA presented a 12.3% growth of 12.3% reaching US$ 305.7 million and a margin of 13.4% of net revenue. The net income totaled R $ 18.77 million on 2010. (B2W annual report 2010).

**The consumer behavior on the online Retail Industry**

Most of the products that are sold by the online retailers can be classified as consumer goods (durable and nondurable). This group of products have a great advantage on the online selling process since most of them are not experience good, like clothes and perfumes for example. According to Peterson et. Al (2001), the so called experience goods would be the least indicated to be on the online retail industry. This fact is even stronger for the Brazilian market, where the consumers are used to touch and see physically the products that they intend to buy, in special the so called experience good.

In this sense, on the online retail sector, the use of the internet to search for information before purchasing a product in predominant. This behavior was also confirmed on the questionnaire applied on this study, indicating that for 25% of the respondents pointed that the percentage of retail products bought by e-commerce represents 10-30% of the total retail products that are bought.

According to Mauricio Morgado Professor of the Center for Retail Excellence at FGV-EAESP in Brazil, the good retail web sites are those that bring and facilitate information between brands and products helping the consumer to choose a product, he states that “All information that the sellers person would pass to the customer in the store should be provided in a smart and easy way on the company's sales websites.

✔️ **The “Star Company” Amerericanas.com**

The Americanas.com can be considered the online selling channel of the Lojas Americanas. The “Lojas Americanas” that are the physical shopping store, was founded in 1929 in Niterói, Rio de Janeiro in Brazil.
At the end of 1999 the internet selling channel of the company was created with the aggregated company Americanas.com. On 2006 Amerericanas.com and Submarino, another online retail company from Brazil, were fused creating the group B2W - called the Global Retail company, since than the company became the biggest online retail company from Brazil and South America with multichannel operations around the country and also abroad.

Nowadays is present in all regions of the country (23 states plus the Federal District), with 541 stores - 329 in the traditional physical format and 212 Express - equivalent to 564,000 meters squares of sales area. The “Lojas Americanas” also have three distribution centers located in Sao Paulo city on the state of São Paulo, Rio de Janeiro, Rio de Janeiro State and Recife on the state of Pernanbuco, which are also used for the americanas.com, the online shopping stores.

The figure bellow indicates in red the states of Brazil that the physical stores are presented and also the number of stores by region. The distribution centers (DC) are also identified with yellow dots on the map. São Paulo (DC – SP), Rio de Janeiro (DC – RJ) and Recife (DC - PE).

![Figure 26: Lojas Americanas Physical Stores distribution.](image)
The physical stores have average selling area of 1,500 square meters, daily inventory replenishment and approximately 60,000 items. The Express model follows the concept of smaller stores, with average sales area of 400 square meters and a selected assortment of around 15,000 items that are more appropriate to the characteristics of each location and to the consumers’ profile of each region. (Lojas Americanas annual report, 2011)

B2W is listed on the Brazilian share market – BOVESPA, the Shares are listed on the Novo Mercado segment of BOVESPA and are traded under the symbol "BTOW3."

Moreover, B2W owns in its portfolio several different companies with a variety of products and service. The companies that are owned by B2W are: Americanas.com (online retail), Submarine (online retail with innovative technology information platforms), Shopetime (retail products by telesales, catalogs and TV), Ingresso.com (online technology for tickets sales on the internet), Submarino Finance, B2W Travel (Touristic advisory services) and Blockbuster (movie rental through internet and physical stores). The companies together offers hundreds of thousands of products and services in over 35 categories of distribution channels through internet, telesales, catalogs and TV.

The figure illustrates the companies that formed the group B2W and the companies that make part of the actual portfolio.

Figure 27: "Lojas Americanas" Administrative Stratification.
The Americanas.com was chosen as the “Star Company” of the retail sector since after only two years of its foundation on 1999, have became a leader in sales and profitability in the e-retail sector in Brazil, being one of the pioneers on the online retail sector in the country (Americanas.com). Nowadays, with over 500,000 products, is the largest online company from Latin America, with approximately 10 million customers on 2010.

Moreover, Americnas.com ranks in the in the first place of the most visited online retail companies in Brazil and in 25th on the overall visits to all the web sites in Brazil. The average that the consumers have spent on the americanas.com website on December 2010 was 10 minutes and 17 content pages viewed.

The table that is presented bellow indicates the ten most accessed companies on the online retail sector and also their position in comparison on all the web sites in Brazil regarding the access number. It shows the maericanas.com leadership followed by Submarino, which is also another company from the B2W group.

<table>
<thead>
<tr>
<th>Online Retail Ranking</th>
<th>Overall Website Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Americanas.com</strong></td>
<td>1º</td>
</tr>
<tr>
<td><strong>Submarino</strong></td>
<td>2º</td>
</tr>
<tr>
<td><strong>Saraiva.com</strong></td>
<td>3º</td>
</tr>
<tr>
<td><strong>Netshoes</strong></td>
<td>4º</td>
</tr>
<tr>
<td><strong>MagazineLuiza</strong></td>
<td>5º</td>
</tr>
<tr>
<td><strong>Shoptime</strong></td>
<td>6º</td>
</tr>
<tr>
<td><strong>PontoFrio</strong></td>
<td>7º</td>
</tr>
<tr>
<td><strong>Extra</strong></td>
<td>8º</td>
</tr>
<tr>
<td><strong>CasasBahia</strong></td>
<td>9º</td>
</tr>
<tr>
<td><strong>Comprafácil</strong></td>
<td>10º</td>
</tr>
</tbody>
</table>

*Source: Alexa, 2010
Adapted by the author*

Table 1: Online Retail Companies Rnaking.
Furthermore, is presented below an image of the actual Americas.com web site showing the all 36 departments that are available on the store. The website can be viewed exclusively in Portuguese.

![Americanas.com Web Site](image)

**Figure 28: Americanas.com web site.**

The site offers 37 categories of products via Internet, telesales and through more than 500 kiosks installed in the physical stores “Lojas Americanas” with access to the site, providing customers with more than 500,000 different items between computers, appliances, electronics, phones, toys, furniture, house wares, DVDs, books and more. The website presents a agile and flexible platform, with assertive a search engine. (Americanas.com annual report 2011).

Moreover, in order to attend the consumers demand, all the products that are available on the web site have 3 or more images and a "super zoom" feature which allows viewing of images with a resolution up to six times higher, and the button "more details", where customers can access all information product without having to change pages during your navigation.

The buying process at americanas.com starts when the consumer selects a product between the 37 possible categories from the web-site. After that, a registration process is needed, creating an americanas.com account with personal information. The third step
is the payment process which the clients can choose to pay by credit card, bank slip or via online banking. Next, if the payment is regularly processed, the consumer receives an email with a number identifying the product, using this number the consumer can visualize on the Americana.com website information about the delivery system until the product arrives on the address indicated by the consumer. It is also a possibility to choose to delivery on a specific “Lojas Americanas” physical stores and the client has one week to pick up the product on the physical store.

**Logistics and Supply Chain of Americanas.com**

According to Bayles (2001) the home delivery can be seen as one of the most important points of the e-commerce, since it is through it that the convenience of buying without leaving home is expressed.

The delivery process has great importance on the online retail sectors, but the logistics procedures due to its complexity might become an expensive process. However, if well managed, might be a competitive advantage to the online retailer.

According to the questionnaire applied on this study, a reliable delivery service was pointed as the most important point on the buying decision process for the Brazilian respondents. Knowing that, the companies operating on the Brazilian e-commerce market invests a lot of money on information technology and physical storage structures to ensure an effective delivery system.

In the case of the selected “Star Company” Americanas.com, the supply chain and the logistics of delivering the products have achieved a high standard of excellence in delivery of products purchased. The integration of various factors such as a good supplier relationships, actual and effective information systems, and especially the fulfillment of customer expectations led to a high level of quality in delivery (Americanas.com annual report, 2010).

The infrastructure that involves the logistics of delivery reflects the integration of various factors involving all the links of the supply chain. According to Americanas.com annual report, on 2010 the average of delivered products per month was around 55,000 products delivered with quality and in the right time and place.
After the products being purchased at Americanas.com website, the information is transmitted to a central center at Rio de Janeiro that manages all the purchase requests. After the payment being approved the request is sent to the closest distribution center from Americana.com that the same storage and distribution centers used by the physical stores “Americanas.com”. The distribution centers are allocated on three different states in Brazil: São Paulo, Rio de Janeiro and Pernambuco on the northwest portion of the country. Inside the distribution centers the products are received, sorted and shipped to the consumers’ address. The delivering process is done by outsourced shipper companies to the address indicated by the consumers when buying in the internet. The products are delivered throughout Brazil and in over 220 countries as Japan, United States, Germany and others. During the shipment process, the product can be tracked along whole route. Moreover, in case of defect or malfunction of the product delivered, the consumer do not have the option of receiving the money back, but the product can be changed by sending it back to the closest distribution center or even on the closest “Americanas.com” physical store.

The figure bellow illustrates the steps on the supply chain to deliver the products bought online at Americanas.com website occurs.

Figure 29: Logistics and Supply Chain of Products distribution - Americanas.com.
In comparison with the traditional logistics applied to the physical stores, according to Fleury and Monteiro (2005) that studied the main differences on the traditional logistics and the e-commerce logistics for the Brazilian market, the e-commerce logistic represents higher complexity levels in comparison with the logistics applied to the physical stores.

The main differences are presented by the table below.

<table>
<thead>
<tr>
<th></th>
<th>Traditional Logistics</th>
<th>E-commerce Logistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Method</td>
<td>Palletized</td>
<td>Small Packages</td>
</tr>
<tr>
<td>Clients</td>
<td>known</td>
<td>Not known</td>
</tr>
<tr>
<td>Product Flow</td>
<td>unidirectional</td>
<td>bidirectional</td>
</tr>
<tr>
<td>Destination</td>
<td>concentrated</td>
<td>Highly Spread</td>
</tr>
<tr>
<td>Demand</td>
<td>Stable and Constant</td>
<td>Uncertain and Fragmented</td>
</tr>
</tbody>
</table>

Source: Fleury and Monteiro (2005)

Table 2: Traditional Logistics X E-commerce Logistics.

Applying for the Americanas.com case, besides the characteristics presented on the table above, the logistics have an extra link that are exactly the physical stores. On the other hand, since the consumers come to stores to buy, the information technology investments are lower. However, while the demand style on the e-commerce can be categorized as "Pull type" (meaning Make To Order - the production is based on actual demand, on the traditional physical stores the production is not based on actual demand – Make to Stock, classified as "Push type" demand.

5.1.7.2. Publishing sector – “Star Company” Saraiva

The sales of printed books are falling in most markets worldwide and for the fiction genre the decreases are particularly pronounced. These figures were presented during the Italian event IfBookThen based on the Nielsen BookScan from the beginning of 2012. The results have shown that the drop on sales of printed books in the U.S.A
almost doubled in the last two years. In European countries like the Spain and in the UK the reduction in sales of physical books was around 12% in the first month of 2012.

On the other hand, the e-books sales presented a continued growth along the years. According to Mike Shatzkin, president of the consultancy The Idea Logical Company, the sales of digital books around the world, more than doubled from 2007 to 2010.

However, in the Brazilian market the Internet has not been able to diminish the prestige or decrease the sales of printed books. According to the last edition of the report “Production and Sales of the Brazilian Publishing industry (2011)” that is conducted annually by the National Union of Book Publishers (LETS) and the Brazilian Chamber of Book (CBL).

The table bellow illustrates number of titles, the number of copies sold in millions of units and also the revenues expressed on US$ billions of the publishing sector in Brazil from 2000 to 2010.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Titles</th>
<th>Copies sold (in Millions)</th>
<th>Revenues (US$ Billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>45,111</td>
<td>3,34</td>
<td>1,14</td>
</tr>
<tr>
<td>2001</td>
<td>40,901</td>
<td>2,99</td>
<td>0,94</td>
</tr>
<tr>
<td>2002</td>
<td>39,800</td>
<td>3,20</td>
<td>0,8</td>
</tr>
<tr>
<td>2003</td>
<td>35,590</td>
<td>2,55</td>
<td>0,83</td>
</tr>
<tr>
<td>2004</td>
<td>34,858</td>
<td>2,88</td>
<td>0,79</td>
</tr>
<tr>
<td>2005</td>
<td>41,528</td>
<td>2,70</td>
<td>1,06</td>
</tr>
<tr>
<td>2006</td>
<td>46,026</td>
<td>3,10</td>
<td>1,27</td>
</tr>
<tr>
<td>2007</td>
<td>45,092</td>
<td>3,29</td>
<td>1,58</td>
</tr>
<tr>
<td>2008</td>
<td>51,129</td>
<td>3,33</td>
<td>2,03</td>
</tr>
<tr>
<td>2009</td>
<td>43,814</td>
<td>3,87</td>
<td>2,13</td>
</tr>
<tr>
<td>2010</td>
<td>54,754</td>
<td>4,37</td>
<td>2,52</td>
</tr>
</tbody>
</table>

Source: National Union of Book Publishers (LETS) and the Brazilian Chamber of Book (CBL), 2011.
Prepared by the Author

Table 3: Production and Sales of the Brazilian Publishing Sectors.

Moreover, the study Production and Sales of the Brazilian Publishing industry (2011), indicated that on 2010 there were about 750 active publishers on the Brazilian Publishing sector. Of these total, 498 are categorized in the criteria of UNESCO Publishers: publication of at least five titles per year and production of at least 5000 copies / year.
The 498 publishers classified by the UNESCO criteria are divided on four different levels (A, B, C and D) according to their revenues as indicated below, the number of publishers that are inserted on each level is also presented.

A: revenues up to US$ 0.55 million - 231 publishers:
B revenues between US$ 0.55 million and US$ 5.5 million - 189 publishers
C: between R$ 5.55 million and US$ 28 million - 62 publishers
D: revenues exceeding US$ 28 million - 16 publishers

The figure below illustrates this scenario indicating the representation in percentage of each one of the levels.

![Figure 30: Number of Publishers according to Revenue levels.](image)

In addition, it is presented below, the participation by subject area in the Brazilian publishing sector. It can be seen that the elementary and high school books represents almost 50% of the total sales followed by literature with 21%, Scientific and Technical books representing 14% of the sales, next with 10%, the books related to the religious thematic and on last place representing 8% of the total book sales on 2010, the teaching division category of books.
Companies and Market Share on the Publishing Sector

As mentioned before, the Brazilian publishing sector had 498 publishers classified by the UNESCO criteria on 2010. The market share of the most important companies are represented by the figures below, indicating the revenues in millions of US$ for the three most significant subject areas: Scientific, Professional and Technical, Elementary and High School and Literature respectively.

Moreover, the numbers that represent the “Star Company” Saraiva are highlighted in orange.

Figure 32: Scientific, Professional and Technical Market Share.

Figure 33: Elementary and High School Market Share.
The consumer behaviour on the Publishing Brazilian Sector

The literature review based on the consumer behaviour of the use of the internet channel to purchase books and similar, proved to be very poor with few studies about the buying process itself, as stated by the international author Cheung et al (2005). For the Brazilian reality the studies on these are even more scarce. One of the few studies was developed by Oliveira (2007) that analysed the consumer behaviour of students from an administration bachelors course on University of São Paulo. The study involved a survey with the students.

The main results from the research have concluded that even though the purchase of books took place using the internet websites, the buying decision process showed a high frequency of experimental sources and personal feelings in the step of searching for information, meaning that the consumers tend to use personal source of information like friends, family or their professor’s information before actually acquiring a book. Moreover, the study also highlighted the price is one of the most important aspects for the respondents of the survey, since they expect to find better prices on the books bought on the e-commerce in comparison with the physical stores. (Oliveira, 2007).
The “Star Company” Saraiva.com.br

The selected “Star Company” from the Publisher Brazilian Sector, Saravai.com.br is the online sales channel from the Saraiva Publisher and Bookseller Company. In this sense, is presented below the timeline of Saraiva that can be seen on the company's website.

- 1914 – The Portuguese Joaquim Ignácio da Fonseca Saraiva, after two decades living in Brazil, founded the company Saraiva & Co., a small family business that traded used books.
- 1934 - The publisher extends its commercial activities and also begins to edit textbooks, general literature, science, etc.
- 1947 - The company becomes a corporation under the name Saraiva SA - Booksellers Publishers.
- 1998 – It is inaugurated the sales of products Saraiva via the Internet through the website www.saraiva.com.br. One of the first e-commerce sites in Brazil.
- 2006 - Entrance on the Corporate Governance Practices Level 2 of the stock market of BOVESPA. Three million preferred shares were distributed, strengthening the Company's financial position.
- 2009 - The Saraiva Group settles in its new headquarters located in Sao Paulo. Promoting the unification of all operations of the Publisher and the Bookstore, providing greater synergy of actions and initiatives.
- 2010 - Saraiva.com.br Launches Digital Reader, a platform that allows the sale of digital books (e-books). In April 2010, the first store iTown, that is entirely devoted to the selling Apple products is inaugurated on Sao Paulo City.
- 2012 - In January it’s released the Signatures Saraiva, a new portal for online magazine subscriptions, culture, entertainment, business, health, beauty, entertainment and more. Saraiva launches in June, in partnership with Giuliana Flores, a channel for online selling flowers and gifts: Saraiva Flowers.

The group Saraiva operates a diverse number of sales channels, being a multichannel company. The corporate governance adopted by Saraiva is presented
bellow. Under the administrative board, there are the Publishing sector of the company, the Bookstore and also the e-books selling area.

![Diagram of Corporate Governance of Saraiva](source)

**Figure 35: Corporate Governance of Saraiva.**

The publishing sector of Saraiva is presented on the 26 states plus the federal district of Brazil. Assuring nationally presence with 12 branch and 17 authorized dealers all over the country. The branches carry their own inventory that attending the local demand maximizing the sales efforts.

Moreover, some of main selling channels that are used for Saraiva are presented by the figure, that shows the representatively of the net revenues in percentage.

![Net Revenues by Channel](source)

**Figure 36: Net Revenues representatively by selling Channel - Saraiva.**
• Super Stores: Involving integrated coffee shops, children place and facility for events, operates with a complete products mix with more than 71 thousand items.
• New Regular Stores: Operates with approximately 29 thousand products involving books, stationery, periodic, CDs, DVDs and Blu-Rays.
• Regular Stores: 15 thousand items. Main products category: books, stationery, periodic
• iTown Format: Apple Premium reseller, innovative products and maintenance services.

The figure below indicates the stores distribution along the country according to the sales channel that is operated. The black star, on São Paulo state, indicates the Distribution center of Saraiva that is addressed on São Paulo city and is responsible for providing products for the rest of the country.

Source: Saraiva – Overview and Consolidated Results, 2011

Figure 37: Multichannel Stores Distribution and Distribution Center - Saraiva.

The online selling channel - Saraiva.com.br
The online selling channel from the group Saraiva is the Saraiva.com.br website. The online portal was inaugurated on 1998 being the pioneer company to sell books and Magazines by the internet. Nowadays, Saraiva.com.br is the third biggest product selling website in the Brazilian web market and one the biggest online book retailers.

On December 2011 the online channel had approximately 1,8 million active consumers. All the operations are integrated with the physical stores providing dilution costs and facilitating the logistics of the company.

The Saraiva.com.br website have an innumerous quantity of products, divided on 21 different categories (Books, International Books, E-books, Tablets, Online Movies, Movies, CDs, Mp3 and ipod, Toys, Online Pictures Printing, Photography, Stationery, Games, Software, Informatics, Appliances, Telephony, Beauty and health and Gift Card and Flowers).

The website front page of Saraiva.com.br is presented bellow.

![Saraiva.com.br online Chanel.](image)

Figure 38: Saraiva.com.br online Chanel.
Logistics and Supply Chain of Saraiva.com.br

The supply chain and the logistics of the Saraiva.com.br is directly integrated with the physical stores and with the company publishing sector. After the product being ordered and payment being approved, an email is sent both to the client and to the distribution center of Saraiva that is located in São Paulo city and is integrated with the company’s headquarter facilitating the information exchange. After that, the product can either be sent to the client address or go to a previous selected physical company by the client that can have 10 days to pick up the products. If the second shipping method is chose, the client do not have to pay the costs involving the freight.

Moreover, the figure bellow illustrates how the logistics and Supply chain of delivering the products bought by Saraiva.com.br occur.

![Saraiva.com.br Logistics and Supply Chain](image_url)

Figure 39: Saraiva.com.br Logistics and Supply Chain.
5.1.7.3. The Telecommunications sector – “Star Company” VIVO.

The use of mobile telephony in Brazil began in the end of 1990. In the same year, the Mobile Cellular System (with the initials SMC in Portuguese), started to operate on the city of Rio de Janeiro with a 10 thousand terminal capacity, representing an important mark for the Brazilian telecommunications sector.

In 1998 the government privatized the Brazilian system of mobile telecommunications. From there on, with the end of the state control on the fixed and mobile telecommunications industry and the entrance of new companies, the Brazilian telecommunications industry faced an important and strong expansion. (ANATEL – National Telecommunications Agency, 2010).

In 2001, the National Telecommunications Agency (ANATEL) releases new rules for the mobile telecom exploration increasing the number of terminals and improving the old system.

From there on, the innovation on this sector became evident, the rivalry between the companies became evident with high marketing expenses contributing to the decrease of the tariffs and to high quality services.

The companies that operates on the Brazilian mobile telecom market, adopts a classification criteria for their clients according to the contracted mobile plan. There are two generic plans: the prepaid plans, which the consumers acquire credits which are validated by the operator for future use, there is no monthly bill. Postpaid plans, in this plan there is a monthly bill and a fixed quantity that have to be monthly paid, usually the tariffs for this kind of plans are lower in Brazil. For both of the plans there is a possibility of having 3G internet.

On 2012, there are already more mobile subscribers than people in Brazil. The data from Nielsen Online from 2012, pointed that the mobile telecommunications subscriptions are greater than the Brazilian population, with 220.4 million of mobile subscriptions while the Brazilian population is near 196 million.

Currently there are seven companies operating on the mobile telecom sector in Brazil. The table bellow shows the all seven companies and their actual market share on the Brazilian market.
The figure represents the market share of the four companies that effectively competing in the mobile telecom sector. VIVO has 29.93% of the market share, followed by the Italian company TIM with 26.88%. On third place Claro having 24.59% of the Brazilian market and on the last place Oi representing 18.59% of the market share on the mobile telecom sector.

**Table 4: Mobile Telecom Companies Market Share.**

<table>
<thead>
<tr>
<th>Mobile Telecom Company</th>
<th>2010</th>
<th>2011</th>
<th>May/2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIVO</td>
<td>29.71%</td>
<td>29.54%</td>
<td>29.63%</td>
</tr>
<tr>
<td>TIM</td>
<td>25.14%</td>
<td>25.46%</td>
<td>26.88%</td>
</tr>
<tr>
<td>Claro</td>
<td>25.44%</td>
<td>24.93%</td>
<td>24.39%</td>
</tr>
<tr>
<td>Oi</td>
<td>19.35%</td>
<td>18.78%</td>
<td>18.59%</td>
</tr>
<tr>
<td>CTBC</td>
<td>0.30%</td>
<td>0.27%</td>
<td>0.28%</td>
</tr>
<tr>
<td>Sercomtel</td>
<td>0.04%</td>
<td>0.03%</td>
<td>0.03%</td>
</tr>
<tr>
<td>Aeiou</td>
<td>0.01%</td>
<td>0.01%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Total of Cell Phone (in Millions) 202,944 242,232 220,949

Source: ANATEL, 2012.
Prepared by the author

**Figure 40: Mobile Telecom Top 4 Companies Market Share.**

Source: Teleco, 2012
Moreover, for each on one of the companies that were presented above, are pointed the net revenues of the Cell phone division, from 2011 and the result from the first quarter from 2012. The company Oi did not provided the net revenues from the beginning of 2012. It is important to highlight that all the three companies had net revenues growth comparing 2011 to 2012.

![Companies Net Revenues on Cell phones](chart.png)

Figure 41: Companies Net Revenues for the Cell Phones Division.

✔ The “Star Company” – VIVO

The use of the internet websites used as a marketing tool for the companies on the mobile telecom sector is very significant. All the four main companies have interactive and flashy websites aiming to bring the consumers attention to their promotions and plans. The use of TV advertisements is also something that is intensively explored by the companies on this sector.

The selection of VIVO as the “Star Company” from the mobile telecom sector is justified since the corporation is the market share leader on the sector and presents the highest net revenues in comparison to its competitors.

In this sense, it is presented some important facts involving VIVO along the recent years. The data was taken from VIVO website.
VIVO was founded on April, 2003 when it was completed the merger of a big variety of local companies that previously were controlled by the government and external investments from the Spanish Telefonica and the Portuguese Telecom. On July, 2010 the Spanish Telefonica bought the slice that was owned by the Telecom and became the main shareholder of VIVO.

Since April 15, 2012 all the companies of Telefonica in Brazil became only VIVO, since than the brand in used in both mobile and fixed telephony, broadband and cable TV.

Thus, Vivo S.A operates on mobile telephony, fixed telephony, broadband internet and cable TV in the Brazilian market. The company is also listed on the Brazilian Stock market BOVESPA, under the names VIVO3 and VIVO4.

VIVO is present in all states of the country, with a broad national coverage, including in the northeast where the investments were completed on 2008. According to The National telecommunication Agency (ANATEL), VIVO is responsible for more than 30% of the mobile phone market in the country. The coverage area of the company includes 95% of the Brazilian territory.

The company has both physical stores around the country and also a website where the consumers can check the latest promotions, but also for each client an personal account can be created on the website allowing the following of the latest bills, and the other characteristics that involves the cell phone calling plans.

The online selling channel from VIVO is presented below.

![VIVO website](image)

**Figure 42:** VIVO web site.
On 2011 the company’s market value was around US$ 10.2 million being one of the biggest telecom companies on the world.

Moreover, involving all the branches controlled by VIVO after the merger with Telefonica on 2010 operating on mobile telephony, fixed telephony, broadband internet and cable TV in the Brazilian market have given strong economic synergies for the company.

The graphic shows the economic results from VIVO on 2010 just after merging with Telefonica.

![Economic Results for VIVO](image1)

Figure 43: VIVO Economic Results.

The importance of the so called value added products (VAP), that contains the internet 3G, SMS and data exchange by broadband, on the mobile telecom sector is being evident on the last year. The Graphic bellows illustrated the representatively of the evolution on the net revenues associated with the VAP and broadband internet.

![Added Value Products and Broadband Representatively](image2)

Figure 44: Added Value Products and Broadband Representatively for VIVO.
According to the company information’s analyzed by consultancy firm Teléco, the net revenues of the cell phone plans still grew in 2009, but the trend is to decrease the representativeness. In the other hand, the net revenue of Broadband data exchange and Value Added Services (VAS) grew 42.5% in 2009 representing 13.6% of net service revenues.

In conclusion, the further development of VIVO and other mobile telecom company will be more and more dependent on the Value Added Services and broadband internet.

5.1.8. E-Commerce Questionnaire

In order to have a realistic overview of the behavior of the Brazilian consumers when using the internet to shop, a questionnaire was applied on a ten days gap, between 03/06/2012 – 13/06/2012. An online platform was used to release the questionnaire to graduate and undergraduate students, faculty and staff servers from the Campus of University of São Paulo on Piracicaba (ESALQ-USP).

In total, 115 responses were obtained and the results of the questionnaire will be presented bellow. All the results are based on the questionnaire data.

1. Sex Ratio

The figure illustrates the sex ratio of the sample. It shows that there is a balance between the number of men and women that answered the questionnaire. In total, 52% of the responses represent women and the other 48% represents men.

![Sex Ratio](image.png)
2. Age distribution

The figure illustrates the age distribution of the questionnaire. Since most of the respondents were students, the majority of the responses, 65% of the total, were made by people between 20-25 years old. In second place, with 16%, the age group between 25-30 years old. In the third place, 15% of the total responses were answered by people in the age group of 30 or older. Finally, the smallest proportion of responses is represented for people between 15-20 years old, with only 7%.

In this sense, of the total 115 responses 78% are represented by the age group between 20-30 years old. It is important to mention that those that are in this age gap in Brazil, have a greater probability of shopping online since they are more used with the internet and with the e-commerce.

3. Frequency of Online Purchasing.

The results of the questionnaire show that, between the total of responses, predominantly 63% of the respondents tend to buy products, using the internet, once a month. Moreover, 31% use the e-commerce to purchase products only one time per year. And only 3% of the answers showed that the frequency of online purchasing would be once a week.
The figure below illustrates the frequency distribution of shopping using e-commerce.

### Frequency of Online Purchasing

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>3%</td>
</tr>
<tr>
<td>Once a year</td>
<td>31%</td>
</tr>
<tr>
<td>Once a month</td>
<td>63%</td>
</tr>
<tr>
<td>Once a week</td>
<td>3%</td>
</tr>
<tr>
<td>Two or more times per week</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Figure 47: Frequency of Online Purchasing - Questionnaire Data.*

4. Average expenditures with online shopping.

4.1 The main objective of this stage of the questionnaire was to identify how much money the consumers, that answered the survey, actually spend every month with online shopping. The numbers are represented by the Brazilian currency in REAIS (R$). The results show that the majority of the consumers, 63% of the total respondents, gathering the average spends between R$ 10-50 and R$ 50-100, have monthly expenditures between R$ 10-100.

The figure below represents how much money the respondents spend monthly with online shopping.

### Average Spent on Online Shopping Per Month

<table>
<thead>
<tr>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>R$ 0</td>
<td>9%</td>
</tr>
<tr>
<td>R$ 10-50</td>
<td>27%</td>
</tr>
<tr>
<td>R$ 50-100</td>
<td>34%</td>
</tr>
<tr>
<td>R$ 100-300</td>
<td>20%</td>
</tr>
<tr>
<td>R$ 300-500</td>
<td>5%</td>
</tr>
<tr>
<td>More than R$ 500</td>
<td>3%</td>
</tr>
<tr>
<td>R$ 0</td>
<td>9%</td>
</tr>
</tbody>
</table>

*Values represented on Brazilian currency REAIS (R$)*

*Figure 48: Average Spent on Online Shopping per Month.*
4.2 Percentage of Monthly income spent with Online Shopping.

The percentage of the monthly income that is spent with online shopping is represented by the figure that is presented below. Analyzing the graphic, the greater percentage of respondents, 68%, answered that only 10% of their monthly income is spent with online shopping, showing that the prospects of growth in the e-commerce are quite relevant in Brazil.

5. Payment Method

According to the results of the questionnaire, the most used method to pay the purchases made using the internet is the credit card. On total 74% of the answers indicated that the credit card is the most common way of payment. This payment method is one of the most convenient since the consumer just have to insert the credit card number and automatically the purchase is done. Nowadays in Brazil, due the development of the security on the websites, the credit card use on web transaction is very common.

The figure bellow represents the results obtained on the questionnaire, showing that 74% of the consumers prefer paying with credit card.
6. Importance Ratings.

On this stage of the questionnaire, it was asked to classify, according to a 1 to 5 scale, being 1 “NOT important” and 5 “Most Important”, some specific factors related to the e-commerce, the benefits of online purchasing and also the facts that are not benefic on the e-commerce use.

6.1. E-commerce related items.

The items, web-site and internet security, product delivered on the scheduled time and place, company’s name and reputation, specific product descriptions and product traceability, were classified according to the scale.

The results that are presented on the figure bellow, shows the rating of the items that were classified with 5, as being “Most Important” for the respondents when thinking about e-commerce. In this sense, it can be said that according to results of the questionnaire, the item classification from being the most important is 1st web-site and internet security, 2nd product delivered on the scheduled time and place, 3rd company’s name and reputation and 4th specific product descriptions and product traceability.

The results emphasize that web-site and internet security is one of the most important items for the Brazilian consumers when shopping using the internet.
6.2. Main Benefits of using the e-commerce.

According to the respondents, the main benefit of using the internet to shop is that the products bought online on most of the cases have better prices than buying the same product on a physical store. On second and third place respectively, the convenience of not having to get out of house to buy and the time saved using the e-commerce are pointed as having almost the same level of importance, since one can be the cause of the other. And in the fourth place with 14% of the total responses the fact that on some cases, the products are available only by the web store.

The figure bellow represents the total rating distribution of the answers.

![Importance Rating Classification of E-commerce](image)

**Figure 51: Importance Rating Classification of E-commerce.**

6.3 Main Disadvantages of the E-commerce.
Considering the results, the Brazilian consumers pointed that the main disadvantage, for 32% of the respondents, of buying by the internet is the possible differences between the real product and the pictures presented on the internet. On second place, with 28% of the total, the delivery services that are not efficient were indicated. On third the lack and unclear product’s descriptions and on the last place, indicated as being the less important disadvantage of e-commerce, the lack and inconvenient communication with a seller was pointed out, showing that for the Brazilian consumers the physical presence of a seller person is not a very important fact regarding virtual shopping.

**E-commerce Disadvantages**

![Figure 53: E-commerce Main Disadvantages Points.](image)

6.4. Buying Decision Most Important Points on the E-commerce.

On this stage of the questionnaire it was asked to rate, according to the adopted scale, the most important items in the respondents point of view related to the buying decision when shopping by internet. The results showed that having a reliable delivery services and also better prices are the characteristics that are most important for the majority of future Brazilian clients, adding both of than 59% of the Brazilian consumers had indicated one of the two options. On third place, after sales services was chosen by 18% of the respondents. Having a good web-site presentation was only pointed as being the most important item for 12%, and on the last place the loyalty for the same company with only 10% of the responses. The result showed that the Brazilian consumers are more worried about choosing for a company that have a reliable delivery service rather
than the loyalty and companies name itself. The overall results are presented by the figure.

7. Percentage of on-line shopping that is bought on the three selected Sectors.

In line with the overall objective of the study, this part of the questionnaire aimed to explore the percentages of products that are bought on the three sectors that lead the discussion of this thesis: The Retail Products, Books and Magazines and Cell phones and Telecommunication products.

In this sense, it was asked to the respondents, what is the percentage of the total amount bought of products regarding Retail Products, Books and Magazines and Cell phones and Telecommunication products that is represented by e-commerce.

7.1 Retail Products

The figure bellow illustrates the percentages of the total amount of Retail Products is purchased using e-commerce. The results show that the majority of responses, 39%, indicated that less than 10% of the total retail products bought were purchased using the internet. Moreover, an expressive portion of the answers, 25%, indicates that between 10-30% of the retail products are bought by e-commerce. In addition, showing that retail products have a great internet buying approach, 21% of the respondents had chosen to buy between 30-50% of their retail products by internet.
7.2 Books and Magazines.

Based on the results presented below, it can be said that almost half of the answers indicate that less than 10% of Books and Magazines are bought by e-commerce. For 19% of the respondents, between 10-30% of this kind of products are bought online and only 17% of the answers represented the online shopping responsible for 30-50% of the online shopping of these products.
7.3 Cell phones and Telecommunication products

The results indicated that inside the Cell Phone and Telecommunication products, the use of e-commerce to purchase products is quite low when compared with retail products and also with books and magazines.

The great majority of respondents, 77%, said that less than 10% of products regarding Cell Phone and Telecommunication products are purchased using e-commerce. This kind of products in Brazil just started to be sold on the internet, moreover, the consumers like to test this kind of products before actually buying, what could justify the lower use of e-commerce for this kind of products.

The figure bellow represents the total percentages of the responses of the questionnaire.

Figure 57: Percentage of Cell Phone and Telecommunication products bought by e-commerce
8. Most common Places Used to Shop via E-commerce.

The results have showed that the great majority or 88% of the total responses indicated that the most common place used to shop via internet is “Home”. The answers that indicated “Work” represented only 7% and the other alternatives, with respectively 4% and 1%, “laptop using an external internet connection” and “Mobile phone, iPad, iTouch or similar with external internet connection” were answered.

The figure that is presented bellow indicates that the consumers tend to use their private computers at home to purchase products via internet. In this sense, it cans be concluded that with the increase of computers selling in Brazil on the last years, the e-commerce tend to keep increasing.

![Most Common Places to Shop by E-commerce](image)

Figure 58: Most common place to shop by e-commerce

Percentage of Online Shopping That is Conducted Through Mobile Internet (mobile phone, iPad, iTouch or similar).

The use of mobile internet in Brazil is relatively new and the internet mobile plans are quite expensive. Moreover, to use the internet on a mobile dispositive necessarily needs a Smartphone, iPad, iTouch or similar. In this sense, since the number of Smartphone, or similar mobile dispositive, still low in Brazil when compared to European countries for example, the percentage of online shopping using a mobile internet is expressively low. The figure bellow shows that for 85 % of the answers the
Percentage of online shopping conducted through mobile internet is zero. Showing that the Brazilian consumers are not yet used to this kind of purchasing.


In order to understand how the potential consumers act before deciding to purchase a product using the internet, some specific questions were asked during the questionnaire and will be discussed below.

9.1 Comparison research with similar product.

The main objective was to characterized between the respondents, how often they make research and comparisons between similar products before actually buying this products by e-commerce. The figure illustrates that the majority of answers, 59%, have showed that the potential consumers always make some kind of comparisons or research with similar products before actually buying it. For 27% of the respondents they often make this kind of comparison before purchasing a product via e-commerce.
9.2 How the information about the product is found.

Moreover, it was questioned for the respondents what is the most common ways of finding information about a products that it is indented to be bought. Below is presented by the figure which are the most common ways of getting products information before buying it. Most of the answers indicated that the internet is the way that the respondents most use to find information about a product that they intend to buy. In this sense, it can be said that product advertisements on web sites tend to have a great impact on sales.

![Common Ways of Finding Products's Information.](image)

**Figure 61: Common ways of finding product's information.**

Moreover, also based on the questionnaire results, more than 90% of the respondents indicated that before actually buying, they clearly know what products they wanted to buy and I looked for information about it. Instead of only 5% of the answers that indicated that in most of cases, the online buying is just a result of finding the products attractive and buying it without any previous planning.

9.3 Information Type Most Demanded

In addition to the last topics, this part of the questionnaire aimed to understand what are the main characteristics that are demanded for the consumers before acquiring a product.
It was suggested for the respondents, to rank based on the importance degree the information that is given by Expert reviews, Friend’s opinions and about Price and product characteristics. The results show that Price and product characteristics is the first information most demanded, followed by Expert reviews, and in the third position Friend’s opinions. The table bellow illustrates the results.

<table>
<thead>
<tr>
<th>Information Type Most Demanded</th>
<th>Percentage of total responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>① Price and product characteristics ② Expert reviews ③ Friend’s opinions</td>
<td>38%</td>
</tr>
<tr>
<td>① Price and product characteristics ② Friend’s opinions ③ Expert reviews</td>
<td>26%</td>
</tr>
<tr>
<td>① Expert reviews ② Price and product characteristics ③ Friend’s opinions</td>
<td>10%</td>
</tr>
<tr>
<td>① Expert reviews ② Friend’s opinions ③ Price and product characteristics</td>
<td>10%</td>
</tr>
<tr>
<td>① Friend’s opinions ② Price and product characteristics ③ Expert reviews</td>
<td>10%</td>
</tr>
<tr>
<td>① Friend’s opinions ② Expert reviews ③ Price and product characteristics</td>
<td>5%</td>
</tr>
</tbody>
</table>

Table 5: Information type most demanded on the Buying Decision.

10. Buying Decision

The questionnaire results have indicated that after finding the information on the internet and be decided to buy the product, 42% of the consumers most of times actually buy the products using the e-commerce. For 30%, most of times the final transaction are made by a physical store and 29% of the respondents indicated that it depends on the type of product, buying sometimes by internet and sometimes by a physical store.

11. Future Expectative for the E-commerce

It was questioned for the respondents what are their expectative for the future development of the e-commerce use in the next 5-10 years. The table bellow presents the results.
The main justification pointed for 67% of the answers indicated that their expectative is the predominance of online shopping compared to shopping on physical stores, is that this greater use of e-commerce would occur due to: 1- time saving 2- convenience and easiness of not going out of home 3- better prices when buying online.

On the other hand, for the 20% of consumers that said that in the next 5-10 the predominance of shopping on physical stores will be maintained for than, justified due to the main reasons: 1 -Because the consumers like to actually see the products 2- Going out to shop is seeing as a hobby 3 - Importance of a seller person 4- cultural reasons. Finally for 13% of the total respondents both online shopping and shopping on physical stores will coexist in the same predominance depending on the products specifications.

12. General Classification of the Brazilian E-commerce

Finally the respondents had to give their point of view of the overall services regarding the e-commerce in Brazil. The results showed that more than half of the consumers are quite satisfying indicating that the Brazilian e-commerce could be classified as Good. 37% said that it is Regular and only 7% of the respondents indicated the e-commerce classification as been poor.

The figure shows the total responses regarding the general classification of the Brazilian e-commerce.

<table>
<thead>
<tr>
<th>Future Expectatives for the E-commerce</th>
<th>Percentage of total responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predominance of Online shopping</td>
<td>67%</td>
</tr>
<tr>
<td>Predominance Shopping in physical stores</td>
<td>20%</td>
</tr>
<tr>
<td>Both of than, depending on the product</td>
<td>13%</td>
</tr>
</tbody>
</table>

Table 6: Future Expectative for the E-commerce in Brazil.
6. Conclusions

The presented thesis provided a brief description of the Brazilian Political, Economic, Social and Technological factors that have a direct influence on the companies that are operating on the Brazilian market.

After that, the three previous selected sectors: Retail, Publishing and Telecommunications sector were described and represented for a further analysis by the three “Star Companies”: Americanas.com, Saraiva and VIVO respectively.

Moreover, a questionnaire was applied with 115 students from University of São Paulo aiming to bring up qualitative information regarding the consumer behavior, their preferences and expectative for the Brazilian e-commerce.

Therefore, all the resulting ideas were compiled together in order to form concrete conclusions and possible recommendations for the DaVinc³i project when considering entering on the Brazilian e-commerce in the future.

6.1. Considering the PEST Analysis

The political factors involving Brazil are well established, the country is a Presidential Federal Republic and the democracy has been established since 1985. Thus, something that should be pointed, regards the high taxation policy operating in Brazil. More specifically for the companies that are operating on the e-commerce, the high taxation and the bureaucracy that involves the company’s entrance, especially for international entities that aim to operate on the Brazilian e-commerce, could be an important barrier.

A good possibility for foreign companies, considering the objectives of the DaVinc³i Project, would be to associate with already established national companies before effectively entering on the web market.

On the economic point of view Brazil is nowadays one of the most promising countries worldwide. The government policies for growth acceleration and strong job creation, combined with the appreciation of the minimum wage and internal investments had formed a strong and consolidated economy.
This strong economic development had a direct impact on the Brazilian society. In 2010, despite the international crisis, 103 million Brazilians entered on the C class that has perspectives for continued growth in the coming years. Several studies have shown that the majority of the consumers that use the e-commerce are allocated on the C class. In this sense, the perspectives of continued growth on the online sales for Brazil are substantially high.

Considering the expenditures of the Brazilian families, the studies found out that house, food, transport and Health are in the top of the expenditures matters list. Moreover, a quite important transformation of Brazilian consumption indicated by IBGE, regards an increase on more value added products with higher quality. Thinking about the Flowers sector, this information is quite important, since flowers represents a high value added product.

The latest version of the population projection made by the Brazilian Institute of Geography and Statistics (IBGE, 2012) on 2010, estimated the total Brazilian population was around 193,252,604 inhabitants. The Brazilian population is unequally distributed along the extensive Brazilian territory and the economic and social differences along the country are very pronounced.

Thus, this study was focused on the São Paulo state market, that presents the most important and more develop economy along the country. When thinking about acting on the Brazilian market, especially on the e-commerce, the regional differences have to take into account, and special actions for each region should consider.

6.2. Considering the internet use in Brazil

The Internet is already the most consumed media in the country today, reaching more than 80 million Internet users with a penetration rate around 60%. So the perspectives for future growth on the number of consumers that will use the e-commerce are very strong, enhancing the opportunities and also the revenues of e-commerce. Revenues which are foreseeing to reach US$ 11.3 billion on 2012.
6.3. Lessons learned by the “Star Companies” analysis

After analyzing the three selected “Star Companies”, Americanas.com, Saraiva and VIVO some important conclusion could be taken and some important topics could be considered by the DaVinci project considering the Brazilian e-commerce and its implications on the Supply chain.

It can be said that the Brazilian e-commerce is already strongly consolidated on the country. Currently the e-commerce is much more focused on process improvements and efficiency than actually perform strong rupture actions.

The inflection point of the curve on the e-commerce growth in Brazil happened mainly between 2004 and 2006. From there on, there was a continued expressive growth, but without such changes of presented previous three years.

Regarding the three selected “Star Companies” of this study. Both Saraiva.com.br and Americanas.com were able to use the e-commerce as an important sales channel and also were able to take advantage of being the first entrants on their core business. However, they did not have changed too much the perspectives and management system in comparison to their physical stores.

For three selected “Star Companies” the internet is the most important selling and marketing channel, but they still highly dependent on their physical structures. All the companies studied on this research, can be classified as multichannel companies, operating both physical and online channels. Moreover, considering the most important companies on the actual Brazilian e-commerce all of them operate on the so called “Bricks and Clicks” strategy, using the synergies of these multichannel operations, facilitating the logistics and diluting the cost on the supply chain.

In this sense, it can be said that considering the Brazilian e-commerce and the possible entrance of the Dutch Flower sector on it, the results have shown that most of the companies that presented good results on the e-commerce are multichannel, in this sense the possibility of entering on the web market like a pureplayer (using only the online selling channel) would not be suggested.
6.4. Considering the Supply chain

The analysis of the selected companies showed that there are no significant physical changes in the supply chain of the e-commerce in comparison to the physical stores, most of the companies are still strongly linked to its physical roots. However, something that indeed was directly impacted by the e-commerce is the information technology involving the whole supply chain.

Moreover, the e-commerce foundation by itself embeds a very strong concept of agility and flexibility on the supply chains. Therefore, the decision operate on the e-commerce must be structured in advance in order to meet a future demand.

Thinking about the future projection for the supply chain for the next five to ten years on the e-commerce, it can be said that there is a great chance of a higher integration among the links that forms the supply chain, instead of being a linear and fixed structure.

This strong integration would bring a better information flow along the companies increasing the collaboration and bringing an integrated view of the chain to benefit not just a single point but the supply chain as a whole.

6.5. Considering the consumer behavior

The most evident benefit that the e-commerce could bring would be the reduction of restrictions for their users. If the restrictions are related to not leaving home to shop for example, the e-commerce results in decreasing the restriction. If the problems are related to comparing products and price, the easiness of finding information on the internet can solve it.

On the other hand, for a specific group of consumers the necessities of physically see and touch the product before buying it, and the preference of being face to face with a salesperson, opens two broad perspectives for the companies.

The two channel of selling interactions are inherently different and complementary. The use of only one of these possibilities might bring loss of opportunity for the
companies. In this sense the companies tend to choose chooses the most suitable approach according to their strategies.

Thinking about the Brazilian e-commerce, the most successful companies have adopted not only one, but a mix of the two strategies meeting the consumers needs on both physical and online markets.

6.6. Further Research

There is a broad variety for themes that could be more studied on further research in the e-commerce and supply chain fields. Three of than are proposed bellow.

The actual challenge of the companies inserted on Brazilian e-commerce is to take completive advantages with the growing emergence of the Social Medias and internet communities like Facebook and Twiter for example. In this sense, would be very important further researches towards the challenge for the companies to be able to use the Social Medias explosion on their own benefits bringing more clients to their business.

Another very important topic, regarding the very real possibility of the Dutch Horticultural sector acting on the Brazilian e-commerce, would be related to the bureaucracy, tax system and the legal actions considering the entrance of an international company on the e-commerce.

Finally, since this study only pictures the e-commerce from a small portion of the country, rather limited to the state of São Paulo, would be very much indicated different benchmark studies for each region of Brazil.
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