



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Inclusive and Sustainable Industrial Development Working Paper Series
WP 14 | 2017

NATIONAL REPORT ON E-COMMERCE DEVELOPMENT IN BRAZIL

DEPARTMENT OF POLICY, RESEARCH AND STATISTICS

WORKING PAPER 14/2017

**National report on e-commerce development in
Brazil**

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Vienna, 2017

Acknowledgement

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Acronyms

| | |
|--------------|--|
| ABComm | Associação Brasileira de Comércio Eletrônico |
| BNDES | Brazilian Development Bank |
| Camara-e.net | Câmara Brasileira de Comércio Eletrônico |
| CDC | Consumer Defense Code/ Código de Defesa do Consumidor |
| CGSN | National Simple National Steering Committee |
| CNPJ | National Register of Legal Entities |
| COD | Cash on Delivery |
| COFINS | Contribution to Social Security Financing |
| CONFAZ | National council for financial policy |
| Correios | Empresa Brasileira de Correios e Telégrafos |
| CPF | Cadastro de Pessoas Físicas |
| EPP | Small businesses |
| ERP | Enterprise Resource Planning |
| GDP | Gross Domestic Product |
| GMV | Gross Merchandise Value |
| IBGE | Brazilian Institute for Geography and Statistics |
| ICMS | Intermunicipal transportation and communication services |
| IP | Internet Protocol |
| IPI | Tax on independent product |
| ISS | Tax on Services |
| MDIC | Ministério da Indústria, Comércio Exterior e Serviços |
| ME | Micro Enterprise |

| | |
|------------------|---|
| MEI | Micro-individual enterprises |
| MGE | Medium and Large Enterprises |
| MPE | Micro and Small Enterprises/ Microempresa e Empresa de Pequeno Porte |
| PGDAS | Program Collection Document for Simples National |
| PIS PASEP | Social Interpretation Program and Civil Service Asset Foundation |
| PNBL | National Broadband Plan |
| SEBRAE | Serviço Brasileiro de Apoio às Micro e Pequenas Empresas |
| SEO | Search Engine Optimization |
| Simples National | Integrated System for Payment of Taxes and Contributions of Micro and Small Companies |
| SMEs | Small and Medium Enterprises |
| VAT | Value Added Tax |

Abstract

As the largest national economy in Latin America, Brazil is firmly on the radar of entrepreneurs and leaders looking to expand their businesses. The retail market in Brazil is undergoing a fundamental transformation, driven particularly by the digital shift.

Gross Domestic Product (GDP) growth fell to a low of 3.6% in 2016 according to IBGE. This decline can also be observed in the slow growth of businesses, mainly due to a closed and protected economy, low productivity, heavy government intervention, bureaucracy and weak infrastructure. However, Brazil remains a large and attractive consumer market despite the harsh economic conditions in the country.

This paper will hence discuss the current landscape of Small and Medium Enterprises (SMEs) and E-commerce in Brazil and examine the impact on the country's economy by comparing five years of GDP in relation to SMEs and E-commerce. By understanding various government and private organizations and industry sectors involved, namely Serviço Brasileiro de Apoio às Micro e Pequenas Empresas (SEBRAE) and Empresa Brasileira de Correios e Telégrafos (Correios), the paper will attempt to grasp the status of SMEs and E-commerce in Brazil.

Taking a further look at the E-commerce landscape in Latin America, the paper will identify three key trends: consumers need tangible evidence of why they should trust online retailers; varying modes of payments in different countries apart from credit cards; and trusted brands play an important role in driving E-commerce. It will provide various examples of businesses acknowledging such trends and therefore implementing solutions to capture and cater to a wider target group.

It also aims to explore various initiatives such as the Integrated System for Payment of Taxes and Contributions of Micro and Small Companies (Simples Nacional) and the National Broadband Plan (PNBL) undertaken by the government to aid SMEs and E-commerce and to delve further to evaluate its effectiveness.

At the same time, it will seek to analyze the challenges faced by enterprises that are operating within Brazil or venturing out into the foreign market. These challenges include stifling bureaucratic procedures; high taxes and complicated tax structures; underdeveloped distribution infrastructure; insufficient talent availability; political instability and a volatile economic environment. Supplemented with case studies from Netshoes Group and B2W Digital, the paper will then provide possible recommendations to improve the outlook of the industry.

1. Introduction

1.1 Description of SME and E-commerce and Their Impact in Brazil

The slowdown in economic growth in recent years did not prevent SMEs from expanding. SMEs in Brazil are factors of great importance, because they represent employment for more than 17 million people. Between 2003 and 2013, there was a 33.8% increase in the number of SME establishments, doubling the number of formal employment generated, providing for 52% of all formal employment in the country (SEBRAE, 2015). When we consider the country's overall population of two hundred million inhabitants we can understand the magnitude of such economic segment and how it is responsible for the sustainability of the employment structure. SMEs constitute 99% of Brazilian enterprises and are responsible for more than 27% of GDP.

There is no one single definition of SMEs in Brazil. According to the general law of micro and small enterprises ('Lei Complementar N° 123/6'), the threshold to determine whether the enterprise is a micro or a small enterprise is only the annual turnover. The general law defines the enterprise category micro and small but does not consider medium-sized enterprises.

The criteria used to conceptualize SMEs in Brazil can be found in Figure 1. Another form of classification by the Brazilian Institute for Geography and Statistics (IBGE) is the number of employees in the business. For trade and services sector, the following criteria are observed:

Figure 1. The thresholds of the Brazilian SME definition by 'Lei Complementar N° 123/6' and IBGE

| CLASSIFICATION OF COMPANIES | | |
|-----------------------------------|--|--|
| Categories | Annual Gross Income | No. of Employees in Trade and Services |
| Individual Entrepreneurs (MEI) | Below R\$60 thousand (US\$18.9 thousand equivalent) | - |
| Micro Enterprise (ME) | Between R\$240 thousand to R\$360 thousand (US\$75.6 thousand to US\$113 thousand equivalent) | Up to 9 employees |
| Small Businesses (EPP) | Between R\$360 thousand to R\$3.6 million (US\$113 thousand to US\$1.13 million equivalent) | 10 to 49 employees |
| Medium and Large Businesses (MGE) | Above R\$3.6 million (US\$1.13 million equivalent) | More than 50 employees |

SOURCE: RECEITA FEDERAL, IBGE

Another important institution is the Brazilian Development Bank (BNDES)¹ that adopts the size classification of enterprises according to another set of annual turnover, this being applicable to all sectors.

Figure 2. The thresholds of the Brazilians SME definition by BNDES

| Enterprise Categories | Annual Turnover |
|-----------------------------------|--|
| Micro Enterprise (ME) | ≤ R\$ 2,400,000 (US\$757,000 equivalent) |
| Small Businesses (EPP) | > R\$ 2,400,000 to ≤ R\$ 16,000,000 (US\$757,000 to US\$5,050,000 equivalent) |
| Medium-sized Businesses (EMP) | > R\$ 16,000,000 to ≤ R\$ 90,000,000 (US\$5,050,000 to US\$28,400,000 equivalent) |
| Medium and Large Businesses (MGE) | > R\$ 90,000,000 to ≤ R\$ 300,000,000 (US\$28,400,000 to US\$94,700,000 equivalent) |
| Large Businesses (GE) | > R\$ 300,000,000 (US\$94,700,000 equivalent) |

SOURCE: BNDES

Due to the importance of Micro and Small businesses in Brazil, they are the focus when discussing SMEs in Brazil. They cater mostly to the domestic market and contribute significant value to GDP as can be observed in a later section. They are often referred to as Microempresa e Empresa de Pequeno Porte (MPE).

The global online trade in goods and services increased to US\$1.5 trillion in 2014, with an average growth of 20% from the previous year. Brazil has the ninth largest GDP (World Bank, 2016) in the world and a population of around 204 million, half of which can be categorized as middle class. Many of them remain underserved in various retail categories, presenting opportunities for retailers to enter the market. E-commerce has also been hailed by many as an opportunity to gain a stronger foothold in the multilateral trading system as Brazil has seen explosive growth in E-commerce while middle class incomes have grown together with the internet penetration in the country. According to eMarketer², Brazilians' online spending is expected to almost double in the span of only five years, to US\$30.1 billion in 2019 from US\$16.9 billion in 2014, a compound annual growth rate of 12%.

Despite the macroeconomic challenges Brazil is facing, E-commerce in the country is not likely to suffer as much as other industries as Brazilians are becoming increasingly internet-

¹ BNDES - the main financing agent for development in Brazil

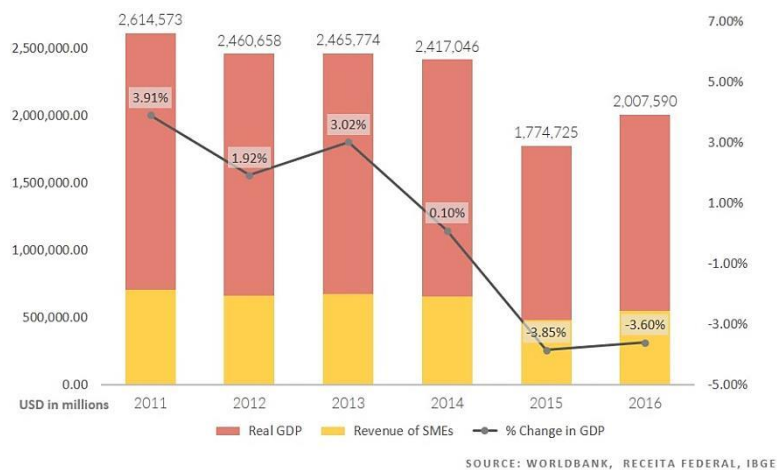
² eMarketer - A respected market research company that provides insights and trends related to digital marketing, media and commerce.

connected with more than 59% of the population with internet access (IBGE, 2016). To take advantage of the opportunity presented by the country's large and young middle class and growing internet connectivity, many SMEs retailers have emerged and expanded into Brazil with their E-commerce operations in the last five years, amounting to a total of 71,000 existing stores as of 2016 due to the low cost of launching an E-commerce store (ABComm, 2016). In terms of employment, each virtual store generates an average of three direct and five indirect jobs, totaling to 718,000 jobs generated by E-commerce in 2016.

1.2 Comparison of Last 5 years GDP in Relation with SME and E-commerce

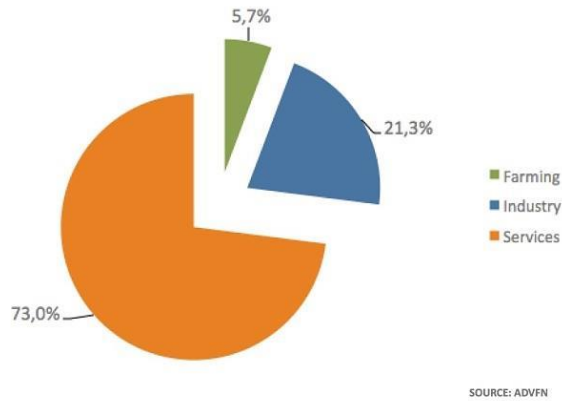
Brazil's real GDP contracted by 3.8% in 2015 which was then followed by a decline of 3.6% in 2016 according to IBGE. Inflation in the country has somewhat eased but remains high at 8.9% in 2016. This can be attributed to US dollar appreciating against most major currencies over the last year. However, because inflation abated, the local currency faces less pressure. With signs of stabilization emerging, the Brazilian economy is forecast to grow in the first quarter of 2017.

Figure 3. Brazil's annual real GDP and SMEs' contribution to the economy, 2011 - 2016



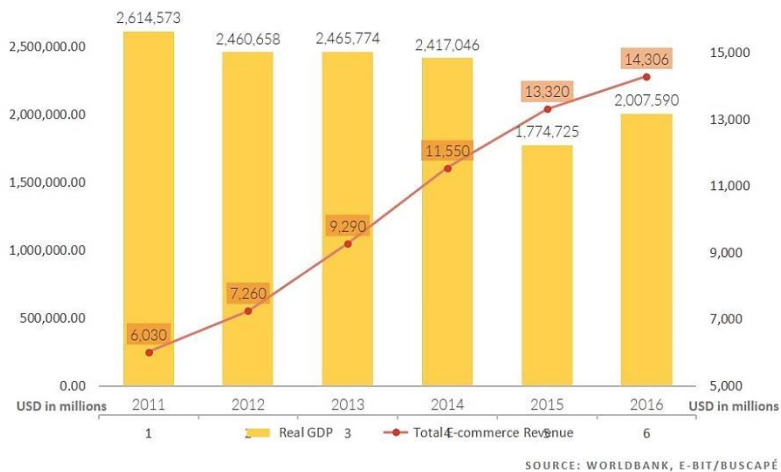
In 2016, the composition of the Brazilian GDP is divided as follows: 5.7% for agriculture, 21.3% for industry, 73% for the services sector. SMEs have a higher concentration in services, of which 86% are in this sector (DataSebrae, 2017 Figure 12).

Figure 4. Percentage participation of each sector in GDP, 2016



The contribution of SMEs remained around 27% since 2011 (SEBRAE, 2016), while contribution from E-commerce revenue tripled from 0.23% in 2011 to 0.75%, amounting to US\$13.3 billion worth of transaction in the year 2015.

Figure 5. Brazil's annual real GDP against annual E-commerce revenue, 2011 - 2016



1.3 Brief Description of Key Government and Private Organizations and Industry Sectors Involved in SMEs and E-commerce

The SMEs and E-commerce landscape in Brazil includes a broad range of organizations from different domains, namely public and private sectors. Each division plays a unique role in the ecosystem. Below are some of the key organizations and their brief description.

Figure 6. Key Public and Private Organizations Supporting E-commerce Ecosystem in Brazil



Ministério da Indústria, Comércio Exterior e Serviços (MDIC)

The Ministry of Industry, Foreign Trade and Services is responsible for the Brazilian Federal Government's Industrial and Foreign Trade Policy. The jurisdiction of the Ministry comprises, amongst others, the following themes: (1) industrial and services development policies; (2) intellectual property and technology transfer; (3) metrology, standardization and industrial quality; (4) regulation and implementation of programs and activities related to foreign trade; (5) international negotiations on trade; (6) public policies on innovation and competitiveness. MDIC also formulates policies to support SMEs and is the main body for registration of trade activities.

Serviço Brasileiro de Apoio às Micro e Pequenas Empresas (SEBRAE)

The Brazilian Micro and Small Enterprises' Support Service is a non-profit autonomous social institution with the mission of promoting sustainable and competitive development of small businesses in the country. By fostering entrepreneurship, providing guidance to help small businesses grow and generate more employment thereby helping to develop the Brazilian economy. SEBRAE aims to create a favorable environment to the development of SME and hence participate actively in the efforts to update legal frameworks, promoting networking opportunities, training programs and partnerships with both the public and private sector to facilitate access to markets and technology.

Empresa Brasileira de Correios e Telégrafos (Correios)

Correios is a state-owned company that operates the national postal service, responsible for the shipping and mail delivery system in Brazil. The company is fully owned by the Federal Government of Brazil and subordinated to the Ministry of Communications. One relevant service provided is e-SEDEX, an express mail service available exclusively for goods acquired through E-commerce companies on a contract basis with a weight limit of up to 15kg.

Associação Brasileira de Comércio Eletrônico (ABComm)

The Brazilian Electronic Commerce Association is a non-profit enterprise that acts as an active voice in government institutions, defends the interests of digital business with public agencies and gathers representatives of virtual shops and businesses in the areas of information technology, events, news portals and marketing services to exchange experiences and make room for micro and small enterprises to participate in discussions about the Brazilian digital market.

Câmara Brasileira de Comércio Eletrônico (Camara-e.net)

Founded on 7 May 7 2001, the Brazilian Chamber of Electronic Commerce is the leading multi-sector entity in Latin America and an organization representative of the Digital Economy. Its role has been fundamental for the promotion of security in electronic transactions, formulation of public policies, and especially for the improvement of sectoral regulatory frameworks that provide legal support to the incentive measures necessary for the development of the country.

E-commerce Brasil

E-commerce Brazil is a private entity promoting the E-commerce market in Brazil, offering specialized content, training professionals in the sector, as well as promoting E-commerce initiatives such as series of events across the country, including the Brazilian E-commerce Forum, considered by Forrester as the third largest E-commerce event in the world and the largest in Latin America.

Reclame Aqui

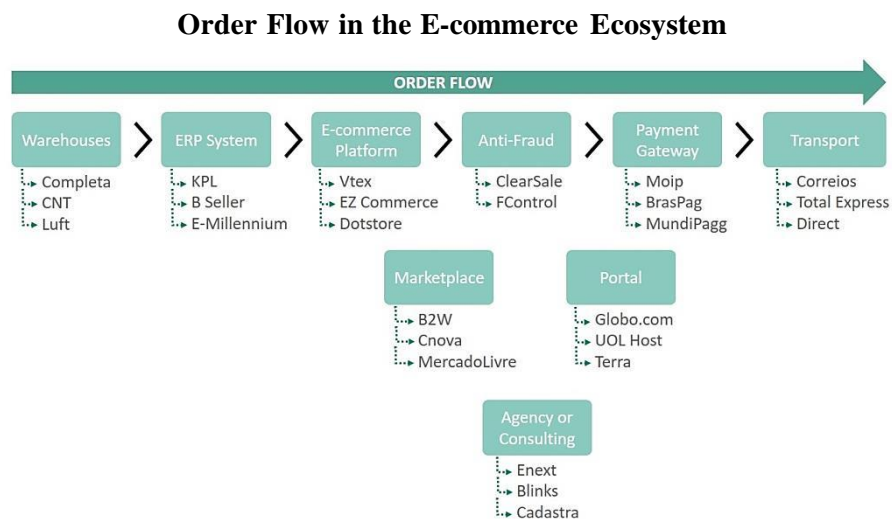
Established in 2001, Reclame Aqui is a website where unhappy customers can expose their complaints. The company is notified and has to provide an answer that is displayed on

the website. The answer is then ranked by the customer. It is also a helpful database that can strongly influence the customer's decision. Reclame Aqui displays a rank in which companies are classified according to the number of complaints they receive and how quickly and effectively they are solved, classifying the best and worst companies.

E-bit

Since 2000, E-bit has been providing competitive intelligence and delivering value to companies and helping consumer in choosing reputed stores. Through a sophisticated system that is connected with more than 21,000 E-commerce entities, E-bit collects data directly from the buyer online and generates information relevant to consumer purchasing decision by giving store certification to merchants. E-bit is also an important source of knowledge about the E-commerce landscape in Brazil, contributing to the development and growth of the industry.

Figure 7. E-commerce ecosystem in Brazil with various key players in the industry



Warehouse

- Completa Logística provides a set of logistics solutions in addition to the complete physical infrastructure to support and operationalize all the necessary steps in the implementation of an E-commerce.
- CNT Log is able to respond to the challenges of the new cycle of E-commerce development experienced by Brazil, developing solutions for its customers in an efficient way.

- For 40 years, Luft has developed customized and innovative solutions for its customers, offering logistics development specialist for the retail industry and E-commerce.

Enterprise Resource Planning (ERP)

- KPL, a leading provider of E-commerce management system - ERP, serves small, medium and large companies with solutions for all phases of an operation, from platform integration to customer service.
- [B] Seller is a cloud service for online retailers to access a complete E-commerce ERP on the market used by the operations of Americanas.com, Submarino.com, Shoptime.com and Soubarato.com.
- E-Millennium provides ERP solution that solves the complex issues of E-commerce, makes it easier for companies to plan and manage quickly and consistently, from startups to complex omni-channel operations.

E-commerce Platform

- VTEX, a pioneer in marketing software as a service (SaaS), today it has presence in 16 countries and 1600 clients in its portfolio, such as Ambev, Electrolux, O Boticário, Danone, Consul, Brastemp, Sony, Nestlé, Alpargatas among others.
- EZ Commerce is a company specializing in E-commerce solutions that has been operating for almost a decade in the Brazilian E-commerce market.
- Dotstore is an E-commerce platform with more than 9 years of experience, integrating sales on mobile and omni-channel features to all the main marketplaces.

Anti-Fraud

- Clear Sale specializes in fraud prevention and detection for a variety of market segments, including E-commerce, telecommunications, door-to-door sales, loyalty programs and financial services.
- FControl is a sophisticated risk management and fraud detection solution for online sales and telesales.

Payment Gateway

- Moip is a payment solution for virtual and physical stores, online signatures and marketplaces.
- Braspag, a company of the Cielo group, is responsible for developing solutions for online payment processing, connecting the shopkeeper to the most diverse payment methods.
- MundiPagg is a platform that generates business through payment technology. Its services go beyond the functionality of a gateway, generating quality, innovation and ease for its customers.

Transport

- Correios is a state-owned company that operates the national postal service of Brazil.
- Direct is the largest private logistics company for E-commerce in Brazil, being a reference in quality of service and in the development of integrated solutions of warehousing, transportation and distribution.
- Abril Groups' Total Express is the private logistics and distribution company with the largest coverage in the country.

Portal

- Terra is a leader in the digital market in Latin America with its three pillars: Digital Services, Mobile and Advertising, providing services to Brazil, Mexico, United States, Spain, Argentina, Chile, Colombia and Peru.
- UOL HOST is a UOL group company that offers products and solutions for digital entrepreneurs such as web hosting, virtual store, cloud computing, domain registration and others.
- Globo.com is an internet portal owned by Globo-Group the largest mass media group in Latin America.

Agency or Consultancy

- Enext is a leader in consulting, digital marketing and E-commerce solutions. It has more than 8 years of experience and 350 clients served, such as: Sephora, Ambev, Arezzo & CO, Fnac, Fast Shop, Onofre, Canon and Pernod Ricard.
- Blinks are a company specializing in digital media performance and branding by creating and managing sponsored links, display, portals, search engines and social networks.
- Cadastra, a full service digital marketing agency, has been present in the market for more than 17 years; it specializes in results oriented performance and is recognized as a pioneer in Search Marketing (SEO and Paid Search).

Order Flow Case Study: Mash

Mash is a Brazilian company of men's underwear, fashion and accessories. Founded more than 40 years ago the company has a wide range of distribution of its products through multi-brand retailers and a proprietary E-commerce channel founded in 2012, which is a separate legal entity from the factory accessed through the website: www.mash.com.br

Mash's complete E-commerce business process works as follows:

The commercial team of the E-commerce together with the commercial team of the company defines the collection, that is, the products that will be allocated for sale in E-commerce. These products are then ordered from the online store to the factory through a purchase order. This purchase order is registered in the ERP of the online store called E-millennium. Products are virtually registered in the ERP system and await receipt of the merchandise in the warehouse.

The Mash online store is in the city of São Paulo, in Brazil. The entire logistics operation is managed by Mash's e-commerce team. The merchandise is shipped from the factory to the store's online warehouse. Upon receiving the products, the logistics manager checks if the invoice is in accordance with the quantity of products as well as checks whether the products received are in accordance with the purchase order made by the E-commerce commercial team of Mash. After this inspection, the products are stored and available for commercialization on the VTEX E-commerce platform. Mash's commercial team talks to the communication team of its agency Enext, which helps to produce online communication campaigns on a variety of channels, such as Email Marketing, Google, Facebook, Globo.com, among others. The Mash

team also offers the products for commercialization through the marketplaces that are available in Brazil, like Mercado Livre, Submarino, among others.

Once the communication campaigns are started, consumers are directed to the site where they can make the purchase. When a customer purchases, the order is processed by Clearsale's anti-fraud system to ensure consumer suitability, as payment is processed through the BrasPag payment gateway. If the order is approved, the VTEX platform sends the order data with the customer's cadastral information, including address, CPF, as well as order data, such as the products that were purchased for the E-millennium ERP.

Once the order arrives in the ERP, Mash's Picking, Packing and Posting team is triggered to begin the order fulfillment process. In the picking phase, merchandise is collected in the warehouse and the product is written off in ERP. At the time of packing the invoice is issued, with all the order information and the taxes to be collected. The invoice is then attached to the product and it is packed. Finally, at the time of posting, a tracking code of the 'Correios' is generated, the carrier used by Mash to perform the delivery. This code is registered on the platform and sent to the customer so that he can follow the order status.

Small Operations Exporting Through E-commerce Case Study: Luiza Barcelos

Luiza Barcelos is Brazilian footwear brand established in 2013 and located in Belo Horizonte, Minas Gerais. In the beginning of 2016, the company started internationalization through E-commerce aiming to market products in the American market on its site as well as marketplaces such as Amazon and Ebay.

The first stages of the business consisted of defining the technological solutions that would be used, including platform, ERP, risk analysis and payment gateway for export. Even though Luiza Barcelos utilizes Rakuten as its E-commerce platform in Brazil, the company has switched to Shopify for its operations in the United States. The Brazilian technology is not adapted for calculating international freight rates, displaying multiple language product information, and its payment gateway and anti-fraud system is incapable of accepting international orders. In contrast, Shopify's solution allows for flexibility in user experience and supports growth in terms of volume and complexity but also has native integrations with the major marketplaces in the US market. With ongoing operations in Brazil, the simplification of the structure was done by discarding the use of ERP and various integrations, as well as utilizing PayPal exclusively as payment gateway, thereby delivering a complete solution in terms of currency conversion without a need for a third-party risk analysis tool. Opting for such a structure has led to some disadvantages for brands that have

a more complex operation such as a lower conversion rate due to the use of PayPal as the only gateway option and inventory availability issues since the products are updated manually.

Another challenge Luiza Barcelos faced was the alignment between the collection launch calendar, the selection of product mix per United States product import rules and business rules (restrictions on the use of skins, products produced in third countries, etc.) and the need for adaptation of content and product to the American market. It was hence necessary to review the method used to categorize and describe the products, as well as the sizes, measurements and nomenclature of the colors adapting to the international market. Finally, once the terms have been defined these are then translated to English. The product registration process, from image scaling to categorization of attributes and various ways to display had to be readjusted to meet the requirements of the American Shopify platform, even though this information is available on the Rakuten platform. To gain agility and reduce costs, the same ecommerce layout was hence used in Brazil, making only some functional adjustments because of the different functionalities of the platforms.

Finally, one of the most pertinent issues was the logistics of sending the products and eventual exchanges and returns. The implementation of the international sales operation was carried out with the help of the Post Office (Correios) team to facilitate the process with the use of the Exporta Fácil service. Delivery times and costs were both greater than that of US-based businesses and this also undermined the conversion rate. However, the challenge of exchanges and returns remains unsolved. Exchange and return request is unable to be resent to Brazil, as there is no return policy for goods purchased by individual consumers outside Brazil. Compared to the ease of exchange and returns in the American market, such a limitation will possibly hinder sales and is especially relevant in segments where SKU sizes do not follow a rigid pattern, such as shoes (not only the size is relevant, but also the shape, width, etc.).

Much of the searches and purchases of Americans are through marketplaces such as Amazon, eBay, among others, and the lack of exchanges and returns has prevented the Luiza Barcelos from utilizing these channels since it is a requirement for sellers in these marketplaces to provide exchange and return policies. As such, Luiza Barcelos is unable to gain access to consumers through the main E-commerce sites in US, losing an important source of target market and a growth opportunity. An alternative is to forgo the Exporta Fácil service from Correios and instead adopt traditional channels such as temporary export which is even more costly and time consuming. However, given the complexity and effort to carry out this

operation with subsequent conversion of the non-returned final export orders, this possibility is not considered.

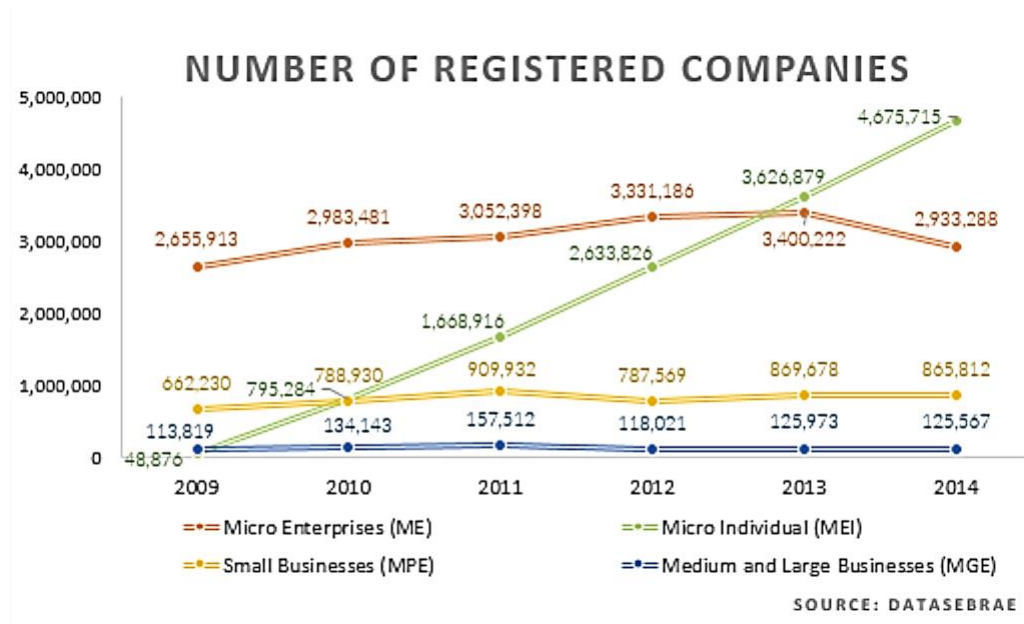
American marketplaces also require the availability of at least one free shipping option. Given the high cost of freight when shipping goods from Brazil to the US, it is necessary to adjust the price of the products to consider the freight value, making it less price competitive.

2. Current Status of SMEs & E-commerce Development in Country

2.1 Current Status of SME

Brazil's unstable economic growth during the past years did not affect the increasing number of companies. 99.1% of all Brazilian companies are SMEs, amounting to almost 8.5 million entities in 2014 (DataSebrae). The growing strength of the Brazilian business sector can be observed below.

Figure 8. Development of number of registered companies in Brazil according to size, 2009-2014



Considering the registered enterprises in 2014, most of them are in the southeast (4,310,074) and the south (1,522,142). The southeast, with its three important states São Paulo, Rio de Janeiro and Minas Gerais - is the richest region of the country in terms of GDP and leads the country in urban population, industries, universities and many other areas (IBGE, 2016). The

south consists of Paraná, Santa Catarina and Rio Grande do Sul, and is the second largest economic pole of Brazil.

The number of micro enterprises in the country rose from 2.6 million in 2009 to 2.9 million in 2014, representing growth of 10.4% in the period. Small businesses (MPE) grew at a rate of 30.7 % from 2009-2014, starting from a total of 662,230 in 2009 to a total of 865,812 in 2014, thereby exceeding the growth rate of 10.3% for Medium and Large Enterprises (MGE). In addition to promoting economic growth SMEs generate employment; in Brazil SMEs account for approximately 17.1 million of employees, equivalent to 52% of jobs created by entities in 2013 (SEBRAE, 2015). They are also responsible for 40% of remuneration paid to formal employees of private companies in the country (IBGE, 2016).

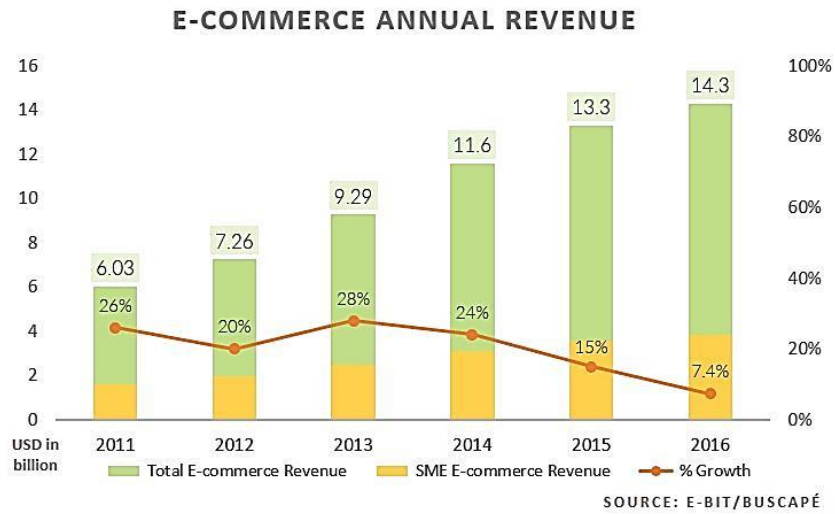
SMEs in Brazil can be divided into four sectors: Industrial, Construction, Commerce and Services. Commerce remained the sector with the highest participation from SMEs even though its relative share fell from 54.6% in 2003 to 47.2% of all SMEs in 2013. In contrast, SMEs in the services sector remained at the second place, growing from 31.3% in 2003 to 37.3% in 2013, amounting to 2.5 million SMEs in the service sector. This growth can be associated with the progressive changes in the increase in household consumption and the expansion of the middle-income group (SEBRAE, 2015).

2.2. Current Status of E-commerce

i. In Brazil

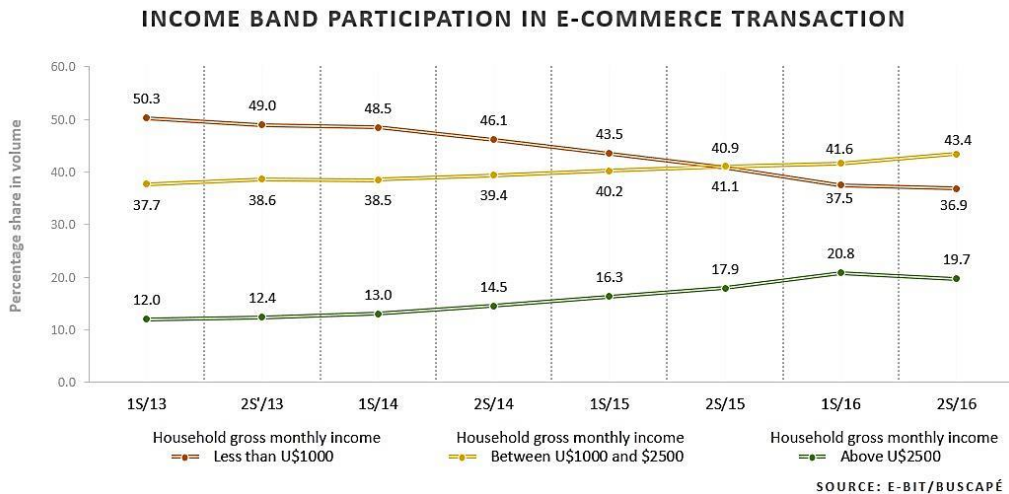
Despite the unfavorable economic landscape, E-commerce in Brazil maintained growth, reaching a total of US\$14.5 billion worth in terms of turnover according to e-Bit. This is a nominal increase of 7.4% compared to 2015. It is estimated that E-commerce will thrive even more in 2017, with an increase of 12% in revenues, reaching US\$16.3 billion.

Figure 9. Development of total E-commerce revenue, 2011-2016



Class C³, which has been fundamental to the growth of online sales in recent years, was more heavily affected by the high inflation rate of 10.67% (IBGE, 2016) caused by the financial crisis; this negatively affected their share to online sales volume. However, an increasing participation of consumers with higher purchasing power can be observed, hence accounting for the 22% growth of active online consumers in 2016.

Figure 10. Participation in E-commerce by income band, 2013 - 2016

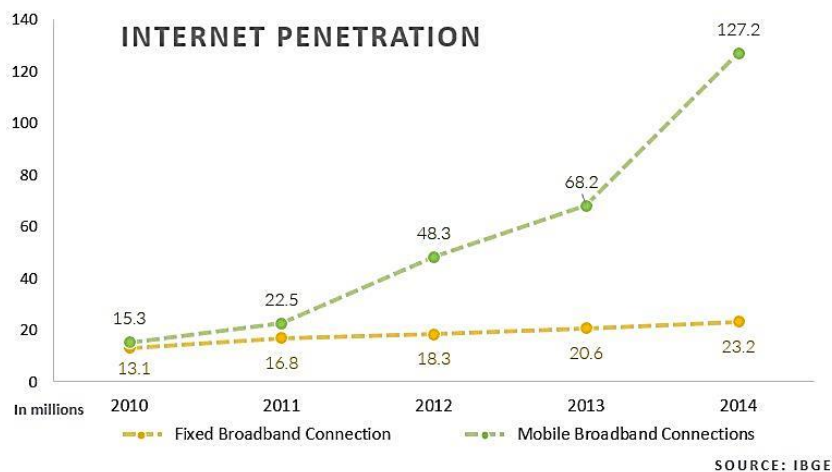


³ Class C defined as - household gross monthly income below R\$3000 by e-Bit

With the rise of smartphones in mid-2010, consumers' purchasing habits displayed a change. In 2015, virtual stores were accessed via a mobile device 35% of the time (e-Bit, 2016) and that is equivalent to more than one-third of the time consumers browse online stores using a smartphone or tablet. Purchases made in 2016 by mobile devices in Brazilian online stores represented more than a 21% share in the volume of electronic commerce compared to 15% in 2015.

To further measure the potential of growth of E-commerce in Brazil, it is essential to keep in mind that Brazil has a population of 204 million inhabitants (IBGE, 2016), with 75 million Internet users and 48 million active consumers as of 2016 (e-Bit, 2017).

Figure 11. Growth of internet penetration for fixed broadband connection and mobile broadband connection, 2010 - 2015



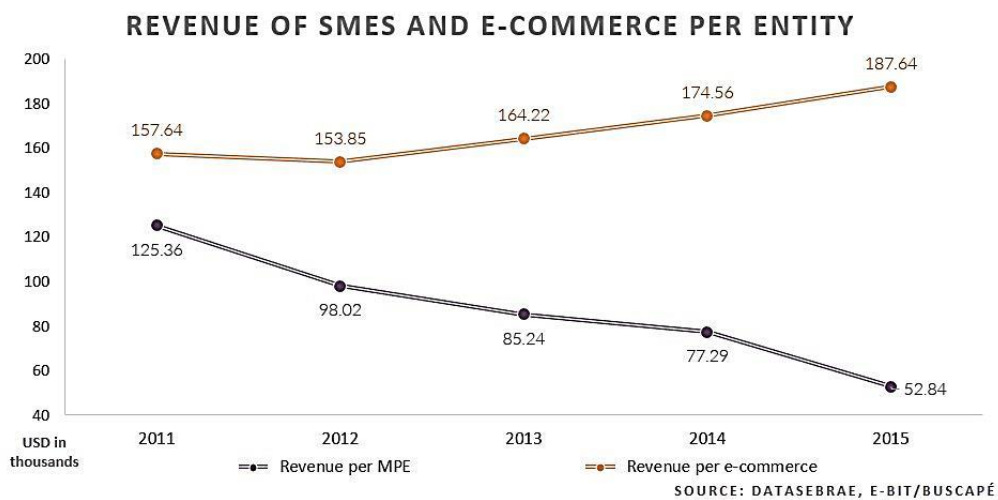
Because of the growing interest rates, scarce credit, rising dollar, unemployment and rising inflation, consumers have become more selective, delaying non-essential purchases and seeking to reduce debt. All this favors E-commerce as they find comfort, convenience, variety of supply and the ability to search and compare prices easily. This explains why, despite the crisis, the market estimates E-commerce growth at around 12% in 2017 (e-Bit, 2017). This number represents a slowdown compared to previous years, but nonetheless, it is a significant growth in the current economic scenario.

There is also a rise in cross border shopping, it is estimated that 21.2 million consumers have purchased items from international websites amounting to a US\$ 2.40 billion in revenue, a 17% increase from 2015 and a 38% increase from 2014 (e-Bit, 2017). Chinese sites have great influence. For example, Aliexpress.com has a 45% share of Brazilian consumers using international sites. This is followed by Amazon.com with 40% due to already existing

operations within Brazil, and eBay with 26%. The top five categories shopped are: Electronics, Computers, Fashion and Accessories, Mobiles and Toys and Games (e-Bit, 2017).

As mentioned, the rapid internet penetration over the years has influenced the growth of E-commerce tremendously by allowing easy access to retailers. Annual gross revenue per E-commerce entity⁴ has increased 19% from US\$157,000 in 2011 to US\$187,000 in 2015. However, the gross revenue per MPE⁵ (Micro and Small Enterprises) has decreased by 58.4% from US\$125,000 in 2011 to US\$52,000 in 2015. Therefore, it can be inferred that MPEs did not benefit as much from the growth the rise in internet penetration. What is worth noting is that the growth of big players such as B2W Digital that achieved 10.6% annual growth contrasts sharply against the large decrease of 18,000 companies in 2016 (Chiara, 2016). This number is more than triple that of the previous year, indicating the scale of the corporate downturn in Brazil.

Figure 12. Comparison of growth of MPE and E-commerce by calculating revenue per entity in Brazil, 2011-2015



ii. In Latin America

With a population of over half a billion and two countries among the world's 15 largest economies, Latin America is firmly on the radar of business leaders looking to expand their digital services. Today's online retail market in Latin America is set to grow substantially. By

⁴ Gross revenue of each E-commerce is calculated using total revenues of all E-commerce annually over the number of E-commerce operating each year using data from e-Bit, 2015 and ABCComm, 2015

⁵ Gross revenue of each MPE is calculated using total revenues of all MPEs annually over the number of MPEs operating each year using data from SEBRAE, 2015

2020, shoppers in just three markets will spend around US\$10.14 billion more online than they did in 2015 (Varon et al., 2016). Online retail markets will be driven by a series of economic factors as well as by increasingly advanced digital services from both traditional and web-only retailers. Latin American markets present retailers with wildly different opportunities. Apart from Brazil, we will focus on two other markets: Argentina and Mexico. Other markets in the region are becoming more prominent on E-commerce leaders' radar, for example, Chile is attractive, given the country's digitally savvy shoppers and the government's support for innovation, but its population of 17.5 million is less than 10% that of Brazil. Conversely, Colombia and Peru's sizable populations (nearly 50 million and 30 million, respectively) are attractive, but their E-commerce maturity is still at a very early stage.

Below are some of the key digital trends that extend throughout the region and the how various retailers have attempted to overcome some of the challenges:

Consumers need tangible evidence of why they should trust online retailers. Retailers need to overcome a variety of barriers to consumer trust, such as payment security, privacy, and fulfillment, for E-commerce to become a truly mass market phenomenon in Latin America. These consumer trust issues are arguably more significant in Mexico, where E-commerce remains at an earlier stage than in Brazil or Argentina. For example, El Palacio de Hierro in Mexico has an extensive help center section on its site that includes step-by-step "How to shop" instructions on, as well as payment security information to educate shoppers about the privacy and security measures in place to protect their personal financial information.

Alternate payment types in Latin American countries. As in most emerging E-commerce markets, many consumers in Latin America do not own a credit card, and many do not have a bank account. Online merchants have turned to alternative payment types to reach these customers. In Mexico and Argentina, some online retailers offer cash on delivery (COD) as an option; in Brazil, the boleto bancário (a printable, bar-coded invoice that can be paid online or offline) plays a similar role. In Mexico, some retailers allow consumers to pay at convenience stores. Additionally, consumers in each market, especially in Brazil, are accustomed to paying in installments for their purchases.

Retailers like Frávega in Argentina, the Submarino in Brazil, and the Liverpool in Mexico provide alternative payment types to appeal to their customers. For example, Submarino offers customers the ability to pay for their product in 15 installments without interest and Liverpool offers customers up to a 30% discount and up to nine months without interest.

There are also several payment options offered by Mercado Livre in Mexico, Brazil, and Argentina. In Mexico, consumers can pay via credit (including up to 18 installments), debit, cash, bank deposit, bank transfer, and their prepaid MercadoPago accounts. In Brazil, consumers can pay via credit (including by 12, 15, or 24 installments), boleto bancario (offline bank deposit), and their prepaid MercadoPago accounts. In Argentina, consumers can pay via credit (including up to 12 installments), offline cash payments at designated locations, and their prepaid MercadoPago accounts.

Trusted brands play an important role in driving E-commerce. Many large traditional retailers in Brazil, Argentina, and Mexico (such as Magazine Luiza, Falabella, and Liverpool, respectively) have embraced E-commerce and have started to roll out omnichannel⁶ offerings. For example, Falabella, which operates its department stores and corresponding E-commerce sites in Argentina, Chile, Colombia, and Peru, offers store inventory visibility and flexible fulfillment options. This model contrasts with markets such as China and India, where web-only players dominate E-commerce. In Latin America, traditional retailers tend to be trusted brands with many decades of experience and therefore are well positioned to play an essential role in boosting consumer confidence in the online channel.

For example, Falabella offers customers flexible omnichannel fulfillment options, including ship to home, pick up in-store, and multiple pickup locations. Falabella also makes store inventory visible online; it shows availability in store, allows customers to select their city, and provides store information to their customers.

2.3 Contribution of SME & E-commerce to the Development of the Country

A substantial amount of work has been done to assess the role of SMEs in driving gross domestic product (GDP) growth and sustaining employment. The evidence suggests that SMEs are vital for economic health, in both high-income and low-income economies, worldwide. Leaders in the retail market are taking note of the Brazilian E-commerce market's explosive growth, and they are expanding rapidly in the country. Below are some of the leading players in the Brazilian E-commerce field:

B2W Digital

The B2W group is the largest online retailer in Brazil and the sixth largest retailer in Brazil. Operating in several different fields of E-commerce, the companies under its umbrella include Americanas.com, Submarino, and Shoptime. In 2016, B2W increased its gross merchandise

⁶ Multi-channel and integrated shopping experience- across all digital devices and physical stores

value (GMV) by 10.6% to US\$4.04 billion, an increase of almost US\$ 386 thousand in absolute terms. Alone, B2W accounts for 26.2% (B2W, 2017) of the entire Brazilian E-commerce market, and as a company selling online since 1999; it is sending strong signals that it intends to remain the market leader.

The growth of marketplaces in the industry cannot be ignored. Many SMEs use such platforms to penetrate the market easily. By aligning themselves with a larger, known business, these stores can gain visibility and, in some cases, use the marketplace's fulfillment options. This is especially beneficial to SMEs without the budget or marketing capability to establish their own E-commerce website and software. With only two years of operations, B2W Marketplace has reached a GMV of US\$714 million, a 153.4% growth from 2015 with more than 4,700 sellers by the end of 2016 (B2W, 2017).

Netshoes Group

Being the largest online retailer of shoes and sporting goods in the world (Fraga, 2014), Netshoes have shown a great potential for growth. It was founded in February 2000, with a store at the back of a parking lot in São Paulo, expanding its goods from women's shoes to sneakers and then to sporting goods. Soon there were eight physical stores, scattered in gyms and a shopping mall in the city. In 2002, Netshoes E-commerce site was launched as the first online store in Brazil focused on sporting goods, and in 2007, 100% of operations were migrated exclusively online.

Today, Netshoes is one of the leading E-commerce companies in Latin America, with its own operations in Brazil, Argentina and Mexico, with annual revenues exceeding US\$645 million. With more than 2,000 employees and an average of more than 70 million visits a month, the company operates more than 20 E-commerce sites in Latin America, such as the official stores of NBA, NFL, UFC and major soccer clubs such as Corinthians, Sao Paulo, Palmeiras, River Plate, Chivas, Mexico, among others. With the consolidation in the sports market and with the know-how acquired from the construction of the e-commerce culture in the region, Netshoes decided to expand their operations to the fashion segment and launched Zattini in December 2014. Netshoes also launched a co-branded card in partnership with Bank of Itaú and has become the official logistics distributor for Midway Labs in Latin America.

Mercado Livre

The second leading player in internet retailing in 2016 was Mercado Livre, which held an 18% share of value sales (Euromonitor, 2017). Argentinian-based Mercado Livre is Latin America's leading online marketplace, with the company operating a country-specific site in Brazil. The

company benefits from a strong infrastructure, enabling third party merchants to easily launch their own stores. It also profits from offering its own online payment service, MercadoPago, which is similar to PayPal. eBay has a strategic alliance with Mercado Livre, holding 18.4% of its total common stock. Mercado Livre had a GMV of US\$ 2.28 billion in 2015 (Mercado Livre, 2016). As one of the biggest marketplaces in Latin America, during first half of 2016, Mercado Livre had 2.2 million unique sellers, 17.6 million unique buyers and 63 million live listings. Other key players include Cnova, Magazine Luiza, Walmart Brasil and Maquina de Vendas.

3. Government Initiatives driving E-commerce & SMEs

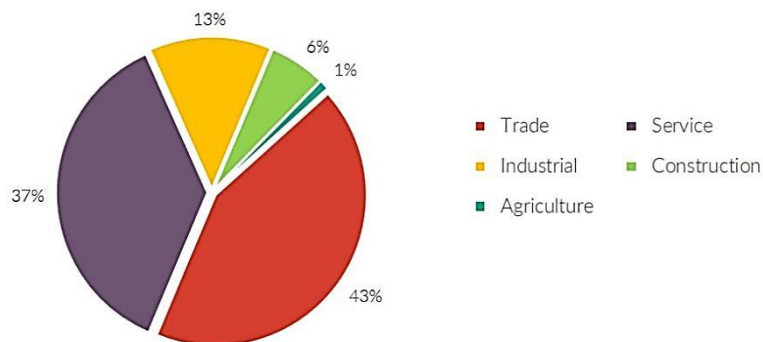
The Integrated System for Payment of Taxes and Contributions of Micro and Small Companies (Simples Nacional) is an optional taxation regime that allows the unified collection of municipal, state and federal taxes. In addition to unifying taxes, the rates are lower compared to the separate payment of these taxes due to various exemptions and is progressively calculated based on the monthly gross revenue of the company. It is on an opt-in basis for companies that are considered micro or small according to their annual gross income. It is regulated by the National Simples Nacional Steering Committee (CGSN), linked to the Ministry of Finance, dealing with the tax aspects of the National Statute of Microenterprise and Small Business (Lei Complementar N° 123/6) and it includes representatives of the union, the states, the federal district and the municipalities.

According to the ‘Lei Complementar N° 123/6’, below are the criteria used for consideration for Simples Nacional:

- Micro Enterprise (ME) - gross revenue below R\$360 thousand (US\$113 thousand equivalent)
- Small Businesses (EPP) - gross revenue within R\$360 thousand to R\$3.6 million (US\$113 thousand to US\$1.13 million equivalent)

Despite strong opposition from states and municipalities as it took away their power to collect taxes from these micro and small enterprises, the concentrated effort of the National Simples Steering Committee, the Simples Nacional is implemented on 30 June 2007. As of January 2017, more than 12 million businesses are enrolled in the Simples Nacional program; the participation from various sectors is shown in Figure 13.

Figure 13. Percentage participation of businesses from each sector, 2017



SOURCE: DATASEBRAE

This represented a significant innovation in the tax structure enabling companies to benefit from the integrated tax collection and significantly reduced tax burden. According to SEBRAE, the average reduction of tax burden for new companies could reach up to 80%, depending on the state that the company is operating in. It also made it possible to increase cooperation between companies and encouraged access to credit and capitalization.

However, the Simples National also received criticism. As the Simples National works on an opt-in basis, only companies that opt in and are approved can take advantage of the regime. In addition, apart from the gross revenue of the company, many other factors (as stated in Article 3 of Lei Complementar N° 123/6) also limit the access to this tax regime. To illustrate this, on an average 37.7% of applications are rejected (Receita Federal, 2017).

Secondly, although the Simples National has enabled significant reductions in tax for most companies, there are some companies that face an increase in tax burden due to the extinction of tax simplification programs on a state level. For example, with the entry of Simples National, state level tax initiatives like Minas Simples, Candango Simples and Simples Gaúcho ceased to exist (Castro, 2010).

Another critique of Simples National is the calculation complexity. The government however has sought to minimize this difficulty with the provision of an electronic system that aids in calculation - Generator Program Collection Document for Simples National (PGDAS).

Specifically, regarding the proposed tax reform, the Simples National is of great value as an initiative of simplification, unification of the collection of taxes, payroll exemption and increased integration of federal entities. Such a measure can still influence and facilitate the approval of initiatives aimed at improving tax legislation. Because it is targeted at SMEs, it

plays an important role in the economic landscape in Brazil, especially regarding the promotion of the domestic market, the formalization of companies and jobs, and hence social inclusion due to such formalization. However, it should not be forgotten that such a programme can potentially become inefficient and companies may feel discouraged to further increase their revenue with the fear of losing economic privileges such as taxes in this case. The steep increase in taxes collected once companies exit the tax regime is a strong deterrent for companies to opt-in.

The National Broadband Plan (PNBL) is an initiative from the Brazilian government to provide affordable broadband internet access throughout the country to individuals, governmental institutions, and businesses that do not have access to this service yet. This includes massively expanding the state-owned backbone infrastructure to reach most of the population and presenting incentives for internet providers to invest in the country's internet service infrastructure. To promote such a widespread adoption of telecommunication equipment and investment in the country's communication structure by private organizations, the Brazilian government started to offer a reduction in taxes with the introduction of the Special Taxation Regimen for PNBL that includes tax relief for broadband network expansion enterprises that used national equipment and construction, revenue for projects specifically developed for telecommunications (15% relief for company revenue and total relief for private individual revenue) and acquisition of M2M equipment . The expansion meant taking advantage of unused government owned fiber optic cables installed by state-owned Petrobras and Eletrobras and installing new cables where needed. From 2011 to 2013, Telebras managed the installation of a country wide network with over 25,000 kilometers of cabling composed of three fiber optic rings-South, Southeast and Northeast and extensions to the North and Center-West regions, with radio towers for data transmission and hundreds of POPs installed across the country (Teixeira, 2014). In 2012 Telebras also opened a Network Operating Center in Brasília to manage the entire network. Since the launch of PNBL, over 612 Brazilian municipalities received service from the Telebras network, which amount to around 40% of the population. From 2010 to 2014, wired broadband connections jumped from 13.1 million to 23.2 million, and in the same period, mobile broadband access increased from 15.3 million to 127.2 million, with the total cities covered jumping from 681 to 2930. This initiative will no doubt contribute significantly to the rise and development of E-commerce within Brazil.

4 Main Bottlenecks Hindering E-commerce & SMEs Development in the Country

4.1 Current Problems/Challenges

i. Internal

Despite good prospects, many E-commerce businesses struggle with expansion in Brazil. Below are some of challenges and issues faced by various enterprises:

Lengthy Bureaucratic Procedures

The process of setting up an E-commerce company can be a daunting task. To obtain the National Register of Legal Entities (CNPJ), one needs to define the category of E-commerce, the legal form of the company, the name and corporate name, the formulation of the social contract and registration with various government agencies including Board of Trade, Federal Revenue Service, State Finance Office and City Hall. Such burdensome regulations and procedures could take up to 90 days to establish an E-commerce entity. These structural problems make it difficult for local and foreign players to enter the Brazil market.

Moreover, Brazil has countless norms regarding the amount, time frame and procedures for payment of taxes. It is a huge challenge to keep track of all the taxation norms and legal procedures. This complexity results in several different types of fines and fees being levied and depending on the severity of the fault, the company could potentially go out of business. Operations are often then challenged by frequent litigations and lawsuits over a variety of issues in addition to the heavy paperwork that must be done. This proves to be extremely time consuming and particularly stifling in a relatively new industry such as E-commerce.

Taxes on E-commerce businesses in Brazil can be divided into two categories, taxes for E-commerce goods and taxes for E-commerce services. The tax payable for the virtual sales of merchandise is a state-owned Tax on Operations related to the Circulation of Goods and on Services of Interstate and Inter-municipal Transportation and Communication Services (ICMS), whereas for E-commerce services, the main tax is the municipal-owned Tax on Services (ISS). Another aspect that should be considered is the company's framework. If an entity is a micro-individual entrepreneur (MEI), US\$ 20 is paid monthly compared to subscribing to the Simples National, tax is paid in a progressive rate, billing every year.

The Consumer Defense Code (CDC)

Brazil offers a unique consumer protection environment: The Consumer Defense Code (CDC) established in 1990 provides regulations for providers and consumers, stating various standards of conduct, term and penalties. It is considered one of the most complete consumer defense systems in the world, which vendors will inevitably find taxing due to the strict and heavily regulated marketplace.

However, the CDC does not have specific regulations for E-commerce, and is framed in the same way as door-to-door sales, which can cause insecurity for entrepreneurs since some regulations can create situations of legal discomfort in case of bad faith of consumers.

One of the main points of discussion is related to the right of return by consumer within seven days of receipt. Often, single use products that cannot be reused, such as food, cosmetics, and others, create loopholes for consumers who use it in bad faith, that is, use the product and then return for reimbursement.

Another situation of potential insecurity is related to the delivery deadline of the order. Sometimes the responsibility of delay in delivery by the carriers ends up with the E-commerce company.

Currently, a bill known as PL 3514/2015 is being processed at the Congress to amend Law No. 8.078 of September 11, 1990 (Code of Consumer Protection) to improve the general provisions of Chapter I of Title I and Commerce, and art. 9 of Decree-Law No. 4,657, of September 4, 1942 (Law of Introduction to the Rules of Brazilian Law), to improve the discipline of international commercial and consumer contracts and dispose of non-contractual obligations. The project brings changes to the Consumer Defense Code and the Law of Introduction to Brazilian Law Norms. However, the measures proposed instead of giving more security to the entrepreneur and mediating in a balanced way, make the provisions even more stringent and potentially increase the costs of the E-commerce operations.

High Taxes and Complicated Tax Structure

Issues with taxes are among the top challenges of E-commerce in Brazil. Taxes are high and numerous, which significantly increase overall costs. Duties, taxes and fees can double the original price of a product, and can vary considerably depending on product category. It is estimated that when opening a company, entrepreneurs hand over 67% of profit in tax (EOS Intelligence, 2013). This is the highest tax burden of all BRIC countries. Furthermore, the complex tax structure drives added costs for lawyers and accountants' compensation to navigate

through various issues with the tax regulators and reconcile tax differences between Brazilian states (as there is no uniform tax across the country).

To illustrate the difficulties of retailing through a company that is not part of the Simples Nacional, E-commerce site O Caneco (www.ocaneco.com.br), established in the beginning of 2015 retails artisanal beers produced in the state of Santa Catarina for all Brazil.

Until 31 December 2015, when an order was accepted, payment was received, the invoice was issued and products were packed together with the invoice and made available to the carrier for collection. This was a fast and agile process which provided great experience for customers. In 2015, the National Council for Financial Policy (CONFAZ) stated that in 2016, a new taxation measure would take place especially for E-commerce retailers - Value Added Tax (VAT) would be charged and shared between the states of origin and destination of the goods through a gradual table. When a good is sold from a company located in a certain state to a store of another federal unit, part of the ICMS is destined to the state in which the producing company is located and the other, to the state where the final consumer acquires the product; the implication for O Caneco's E-commerce business is that, it must bear more operational and bureaucratic burden. When a request is made, it needs to be analyzed for which state the goods will be sent, calculate the ICMS difference, access the state revenue site of the destination state and issue a guide to collect the ICMS difference from the destination state. It requires manually filling all fields with data from the issuer, customer data as CPF address, etc. in addition to entering the 44 digits of the Nota Fiscal access key. However, because of intermittent network problems, not all state revenue sites are accessible and each one has a different usability and this delays the process of collection. In addition, out of 27 states of the federation, 21 of them collect a Poverty Fund tax (Fundo de Combate a Pobreza), which on an average is 2%, and this requires yet another collection guide to be issued for each of the requests for these states.

In any given day, O Caneco receives 30 requests from other states, and this would require the business to issue approximately 60 guides, make payment, physically attach them to the Nota Fiscal of the request and only then dispatch the goods to the customers. O Caneco is a small company, and according to the owner, additional resources are required to carry out the new day to day operations with all associated bureaucracy. This new employment coupled with the increased tax burden makes the business unprofitable.

Another problem encountered is that the ICMS rates vary from state to state, with some tax rates at 12% and others at 18%. As there is no concrete possibility of knowing where the user is accessing due to technological issues and this also creates price discrimination as per the

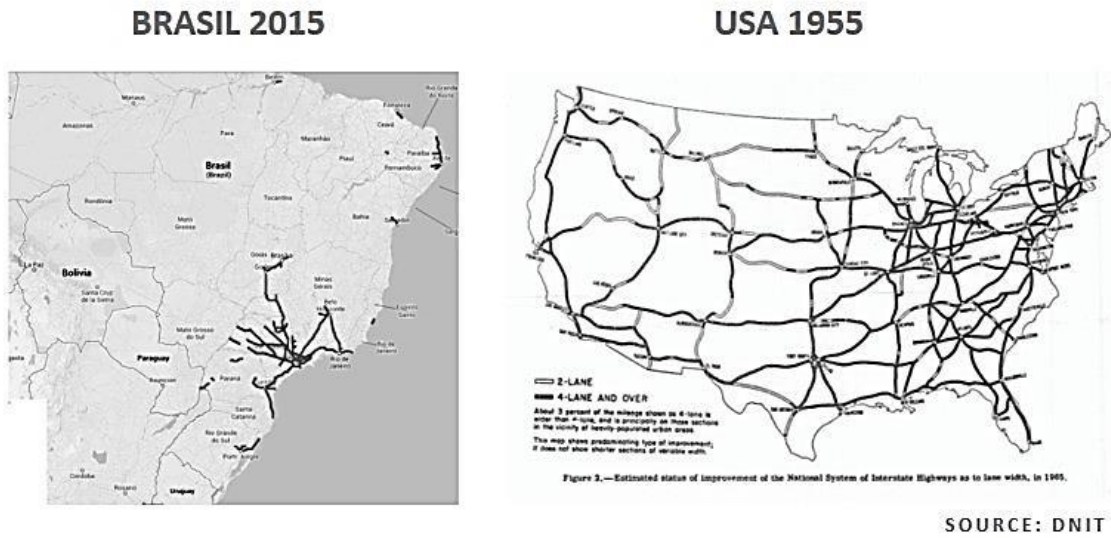
location that the customer is accessing on the product page, directly impacting the consumer's pocket if their state has a rate lower than the average 18%.

This is considered a “step back in the process of de-bureaucratization and reduction of tax burden” because this will not only impact enterprises by paying more taxes, they will also face difficulties in adapting to the additional red tape, dissuading interstate operations. This change in collection of tax is however, overturned by the Federal Supreme court due to the one direct action of unconstitutionality from The Bar Association with support from SEBRAE, ABComm and Ecommerce Brasil working hand in hand. With this, the SMEs that are opted in to the National Simples Taxation regime, that are transacting outside of their current states will only have to pay the National Simples Tax in their transactions.

Underdeveloped Distribution Infrastructure

The country's weak and immature infrastructure has a negative impact on shipping of orders. Brazil is a country with vast territory and majority of transportation is done by road. The country's roads are in poor condition, many of them unpaved, affecting safety, delivery time as well as damaging cargo and trucks. In Figure 13, one can compare the highway network in Brazil in 2015 versus that of United States in 1955, to get a better illustration of the condition of the network infrastructure. Big cities in Brazil are infamous for their traffic congestion, with three cities in the top ten of most congested cities and Rio de Janeiro coming in fourth in the Traffic Index (TomTom, 2016); delivery schedules within these places are affected immensely. Overall, receiving a delivery package by a customer located outside of the major Brazilian cities stretches to a week at a minimum, with frequent cases of customer complaints about packages not arriving within two weeks or more.

Figure 14. Comparing highway network infrastructure in Brazil, 2015 and United States, 1955



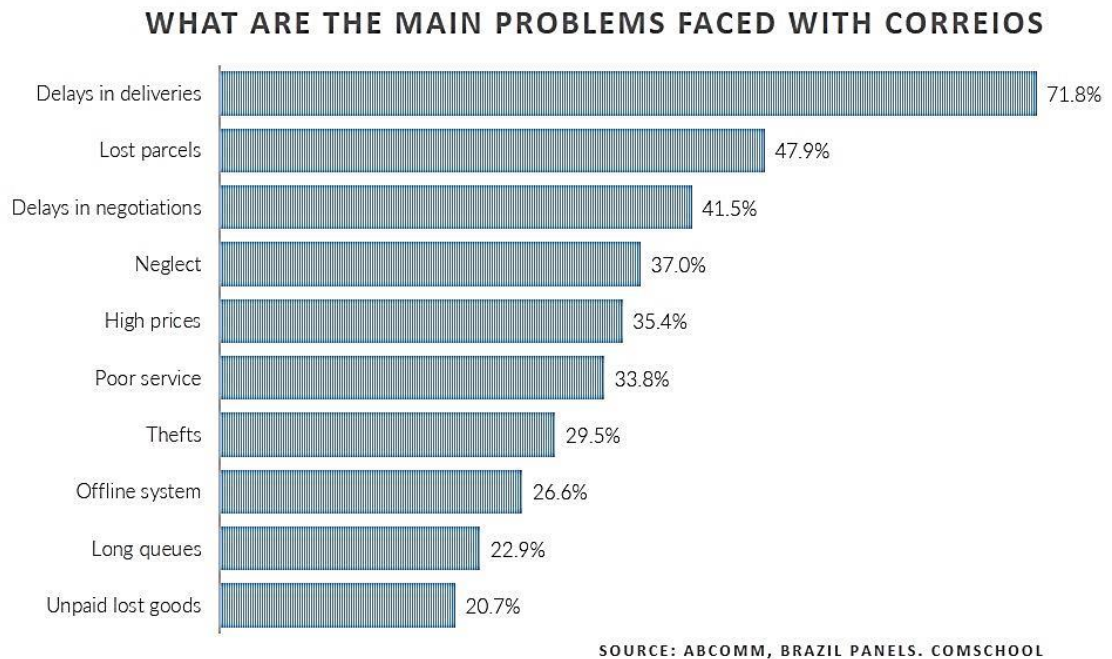
While delivery services are available, many are provided by small, often family owned companies that have limited coverage area and lack parcel tracking systems; thus there is generally inadequate availability of reliable courier services. With the established delivery companies like Total Express and Direct, it is expensive for SMEs involved in E-commerce to engage them due to the small-scale operations. The government-owned national post, Empresa Brasileira de Correios e Telegrafos, does not commonly offer parcel tracking options, inviting fraud, and is considered unreliable and slow. Correios has also recently terminated e-SEDEX, an express mail service available exclusively to E-commerce companies on a contract basis. The e-Sedex service was one of the most commonly used service by SMEs as it provided the convenience of express deliveries at costs 20-30% less than the traditional Sedex. The termination of this service will directly impact the freight prices and further increase financial burden that enterprises must carry.

According to a survey conducted by ABComm 2015, 89.5% of the virtual stores have their own storage, while 5.5% work with a combination of their own and outsourced storage, and only 5% exclusively uses a third-party warehouse to stock the products. When questioned about type of transportation employed, 87.5% of the online retailers use the Correios and 42.7% uses other private carriers. Only 10.9% have their own delivery system.

However, despite being the most used means of transport, Correios suffers from poor level of service. E-commerce retailers demonstrate a high degree of dissatisfaction with the public enterprise. One in four shopkeepers (23.9%) answered that the level of services is poor. Almost

half (44.8%) considered the service to be reasonable and one-third (31.3%) of the shopkeepers rated the service as good or great. Delays in deliveries were highlighted as the main reason for complaints. Lack of security is a national problem and it also has an impact on E-commerce. Casualties, thefts and robberies are the main problems for 47.9% of those interviewed.

Figure 15. Problems retailers faced while engaging Correios, 2015



With regards to the distribution of costs in logistics operations, freight expenses account for the majority at 62.6%, and warehousing expenses and handling expenses are 19.9% and 17.5% respectively. To solve this problem, 57.8% of the virtual stores interviewed pass on the cost of freight to consumers and 31.3% adopt a hybrid model, sharing a partial cost and only 10.9% fully assume the cost of freight.

Insufficient Talent Availability

Even in times of crisis and high unemployment (IBGE, 2016), the E-commerce market faces the challenge of finding qualified people to fill vacancies. The main reasons are the lack of academic training, leaving companies in charge of professional training, the emergence of new roles such as specialists in sponsored links and social media, and the high salaries required by qualified professionals. Traditional schools of undergraduate and vocational training are still unable to train professionals to meet the growing demand for E-commerce, leaving the task to the companies. According to Mauricio Salvador, President of ABCComm, Google itself has been creating professions in areas such as metrics, Search

Engine Optimization (SEO) and sponsored links. Professionals specializing in user experience are important for generating content, photos and videos online. The expansion of social media also demands more and more specialized positions, such as managers, coordinators and social media assistants, as well as directors and content coordinators.

According to a survey by ABComm, most respondents (79%) said that professionals did not meet all the skills needed, while 22% did not know where to find individuals with specific skillsets. For 20% of the respondents, the requested salaries were higher than they could offer and 9% of the candidates were already employed in another company.

When it comes to recruiting professionals, referrals are still the most effective means. From the same survey, of the executives who hired in the last six months, 64% reached the candidates through friends, relatives or co-workers. Social networks have gained importance: 11% of hiring executives found candidates through sites such as LinkedIn and Twitter.

Lastly, due to the high turnover rate in the market, the solutions to retain an employee are the higher salaries and more aggressive bonus policy. The survey indicated that 21% of E-commerce professionals receive between US\$ 1,000 and US\$ 1,600, 19% between US\$1,600 and US\$2,500, 7% from US\$ 2,500 and US\$ 3,650, 8% above US\$ 3,650. The majority (28%), however, receives between US\$320 and US\$ 1,000 and 5% even earn less than US\$ 320.

Volatile Economic Environment

The difficult economic environment, including high inflation, poses a challenge for retailers, affecting investment decisions. Additional risk factors are always a deterrent for incoming businesses as well as entities currently operating in Brazil. Not only does it affect the economic environment, it influences the country's socio-cultural environment, as well as the rate of emergence and acceptance of new technologies.

ii. Entering Brazil's Market (Imports)

Taxation

As mentioned above, companies operating in Brazil are obliged to negotiate red tape that can tie down a company in terms of financial and human resources. Such bureaucracy shifts priorities within a company. This applies for imports in Brazil as well. All items that are worth more than US\$50 are heavily taxed and go through stringent checks. The import duty and taxes payable are assessed on the sum of the value of the imported goods, the costs of freight, and the cost of insurance. In addition to duty, imports are subject to a state sales tax

(ICMS), a type of federal tax (PIS PASEP - Social Integration Program and Civil Service Asset Formation and COFINS - Contribution to Social Security Financing), excise tax (IPI - tax on industrialized product) on certain goods, in addition to some charges like storage fee, air handling fee, airport fee, and declaration fee.

Barriers to Imports

Brazilian custom procedures are costly, complex, and slow. Before entering the market, companies need to be aware of Brazilian product registration and local market certification requirements. A Brazilian business partner is helpful; product registration and compliance procedures are customarily and more easily handled by the Brazilian partner/importer because directly exporting via E-commerce platforms without a Brazilian partner on-the-ground could cause problems for foreign companies in complying with Brazilian laws. Such significant delay affects consumers' confidence and increase costs significantly for the company.

Another issue regarding exports to Brazil is related to the collection of money paid in Brazil. It is difficult for international vendors to sell to Brazilian consumers directly or via local marketplaces due to several particularities, such as the 6.38% IOF tax applied to international transactions, the cost of currency conversion, credit card payments with installments, which can represent 75% or more of all credit card payments, bank slip, the leading push payment method for businesses as well as consumers, that enables anyone to pay for online purchases, in cash at any bank branch, at ATMs or electronically via online banking, the drawback of bank slip is the delayed payment confirmation which might take up to three business days, and online debit card payments and bank proprietary online transfer payments. Besides all local payment methods particularities, there is also the issue of sending the money out of Brazil, because there is no regulation on what type of taxes may be applied for E-commerce orders. Those barriers act as a deterrent for many international companies from entering the Brazilian market and thereby impact E-commerce growth and healthy competition.

iii. Venturing Out of Brazil (Exports)

Financial

In Brazil, every taxpayer is issued an 11-digit identification code by the Brazilian Federal Revenue Agency. This code is called Cadastro de Pessoas Físicas (CPF) and is used in a wide array of day-to-day activities in Brazil involving personal and commercial activities. It is also a local anti-fraud tool to identify each individual. However, when entering a new country, merchants would need to discover a different anti-fraud system per the country, establish a

payment gateway that can capture international purchases and establish an efficient refund process. In addition, merchants are facing technological problems with issuing a Nota Fiscal (invoice) without a CPF number - which is applicable for customers who are not Brazilian. This gap will prevent many retailers from expanding their operations via exports.

Logistics

Merchants will most likely face issues with various complex logistics and customs bureaucracy in the different countries. An unfamiliar ecosystem would prove to be a challenge for distribution and deliveries. A cross-border approach would also mean that returns and exchange policies will be much more tedious and demanding in terms of logistics. In Brazil, it is considered a fiscal evasion when a consumer is unable to issue an invoice to the retailer when carrying out a merchandise return when crossing borders. This presents many challenges regarding shipping, returns and cancellation.

Technology

In many cases, merchants' platforms are solely focused on the Brazilian market and hence information is only available in Portuguese. Further, due to the conditions in Brazil, tracking options are hardly available but if merchants choose to cross borders, they would need to integrate such a feature and provide a calculation of freight charges for overseas consumers.

Fiscal

As mentioned above, Brazil has a complex tax structure for goods and services within the country. To be able to deliver abroad, one would need to follow the Fiscal Code of Operations and Services (CFOP) for exports. Also, due to the regulatory differences between countries, merchants face various time-consuming processes.

Communication

Currently, merchants are not integrated with global marketplaces and marketing campaigns are currently targeted only at the local consumers. Description of products, weight, sizes and measures are all in Portuguese. Merchants find it difficult to communicate with consumers abroad as it requires a certain level of cultural understanding to adapt to the local market.

4.2. Potential Solutions & Recommendations

i. Internal

Bureaucracy and Complicated Tax Structure

Complying with the regulations and taxation environment may take a significant chunk of profits. It is important to approach the market only with the proper preparation, knowledge of the rules, and ideally with proper legal advice from an experienced set of advisors with local knowledge and experience. Brazilian bureaucracy and taxation is complicated and it is advisable to truly understand the complexity before entering the market.

The tax reform proposal is currently being processed at the National Congress with the aim of simplifying taxes. Among the main initiatives to help develop E-commerce and increase entrepreneur security is the creation of a single value-added tax (VAT), which would avoid collecting several guides and facilitate communication with federal revenue. Clear rules for tax distribution, such as the definition of ICMS tax collection between origin and destination for all types of companies is required.

Another point of fundamental importance is the amendment of the Código de Defesa do Consumidor (CDC) with specific rules for the E-commerce business, making the relationship between the parties fair and giving security to the suppliers. It is necessary to establish clear rules both in the Código de Defesa do Consumidor and in the Código Civil for the responsibility of the carriers for in delay of delivery, in addition to creation of specific regulations for the right of return within seven days.

Underdeveloped Infrastructure: Netshoes Case

To solve the logistical difficulties in a country as big as Brazil, strategic partnerships are imperative as it allows an SME to expand its distribution network coverage throughout the national territory at an affordable price. The SME with lower volume of delivery, do not have access to the carriers and rely only on Correios for deliveries. "This lack of option increases the freight to the consumer and there is no movement of the carriers working in Brazil to meet the demand of this specific niche," explained Salgado from ABComm. At ABComm there is a project to set up a business cooperative - an idea of a distribution center to be set up and they will be able to hire other companies within two years to complete their deliveries.

Thanks to strategic partnerships, Netshoes can implement pioneering projects such as Correios, which guarantees delivery within 24 hours. Netshoes can identify if the source of item is a retailer that contracted the service and hence prioritizes it for delivery in peak demand, guaranteeing service excellence. In addition, Netshoes works with more than 15 logistics partners in each region of the country.

Innovation is fundamental to overcoming the telecommunication challenge in the country. The ability to analyze the market and respond with suitable solutions ensures retailers can meet challenges. The "Free Browser" project by Netshoes allowed users to browse stores through their mobile phone without using up data. The project was initiated based on market data indicating that the cost of broadband in Brazil is still relatively high and more than 80% of people still have prepaid plans with data limits. Two weeks after the announcement of the project in November 2015, sales of mobile devices grew 241% compared to the same period last year. During Black Friday, mobile visitors even outperformed the desktop during a few peaks.

Lack of Talent Availability: B2W case

The lack of qualified professionals in the market indicates the need for companies to invest in training and development programs to suit industry requirements. With the emergence of social media management and SEO specialist, it is vital to identify suitable skills aligned with the company instead of looking for very specific skill sets that are scarce. One possible recommendation for SMEs to help mitigate the lack of skilled practitioners in E-commerce, could be to squeeze through organizations such as SEBRAE for government-supported consulting, training, and training programs for companies and E-commerce practitioners.

B2W Digital has done so by maintaining its recruitment and selection, training and skills development programs in-house. Facing increasing demand for qualified professionals to work in the digital market, the company has sought to provide specific training tailored for each associate's profile. In 2015, 69,505 hours were dedicated solely to awareness, technical and behavioral training. Many other opportunities are offered, for example in 2015, B2W Digital offered more than 2,600 promotions, at all levels of the company. These initiatives aid in retaining talent as employees see a long-term future with the company. Scholarship programs and partnerships with universities are established to assist in the development of their employees.

ii. External

Cross-Border from Brazilian E-commerce Companies

To address the problems discussed previously, merchants have to invest time and effort to ensure that all cross-border challenges are addressed. Merchants should ensure that payment gateways can capture international transactions and review the refund process.

Logistics-wise, merchants can engage a cross-docking strategy by appointing agents to mitigate bureaucracy and logistics of export procedures, and processes of exchange and return. Forming commercial partnerships with major markets can also provide easier clearance.

Automatic identification of the origin of traffic using Internet Protocol (IP) addresses to enable language adaptation, currency and rates and payment gateway will aid user experience. Using the current tracking systems of global logistics agents can make up for the lack of such features.

Merchants can also consider adopting management systems for issuing invoices that follows the CFOP export standards to improve productivity by ensuring proper export documentation and customs clearance.

A marketing strategy aligned with the target market culture and interest would greatly improve merchants' chances of communicating with a new target consumer. To increase market access, merchants can consider integrating with key global marketplaces to reach new audiences.

Another recommendation would be to create a fast-track mechanism between Correios and Receita Federal for addressing any changes and returns. Once the client asks for a return, Correios would be ready to operate the reverse logistics and communicate with Receita Federal that there will be an international return, canceling the invoice and preparing a new returning invoice so the client can ship it back to the origin in Brazil.

5. Conclusion

Despite the recent economic instability, retailing in Brazil is undergoing a fundamental transformation with significant growth of E-commerce anchored in the growing number of people connected to the Internet and changed consumer behavior. These favorable trends can further promote E-commerce growth provided the requisite E-commerce eco-system is strengthened.

Despite initiatives like Simples National, there is still a requirement for further support to SMEs for E-commerce development. The main bottlenecks that hinder the faster growth of SMEs in E-commerce are bureaucracy, lack of rules for E-commerce in Código de Defesa do Consumidor,

fiscal and tax difficulties, infrastructure and logistics bottlenecks and a lack of talent with E-commerce skills. Only large E-commerce companies have the capacity to overcome the challenges. They can absorb the costs of bureaucracy and deal with the insecurity of the CDC, as well as invest internally in professional training and transport structure.

Other factors that inhibit growth of E-commerce in Brazil are related to export. This includes problems with validation of consumer identities, lack of agile operational and logistical mechanisms, and the difficulty of realizing exchanges.

There is a clear need to encourage the participation of SMEs in E-commerce development. To do so, it is necessary to support initiatives that improve transportation and distribution infrastructure, improve Correios services for SMEs, have public policies to train professionals for E-commerce businesses, possibly through specialized institutions like SEBRAE, include E-commerce specific rules in the Código de Defesa do Consumidor for addressing issues related to return and delivery delays, simplify tax structure with definition and unification of the ICMS rules. In the case of exports through E-commerce, it is necessary to restructure the technologies to allow international sales, in addition to creating transport and logistics infrastructure that facilitates shipment, and exchange and return of goods.

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