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## Sources and Methodologies for Micro, Small and Medium Enterprises Study in Brazil

### *Abstract*

This article uncovers relevant sources and methodologies to gather knowledge about micro, small and medium enterprises (MSME) in Brazil. To achieve its purpose, the text presents sources and methodologies. This type of study is relatively neglected concerning MSMEs. Until this moment, not much data has been reported about these companies' categories, and even less in advanced research. Among the most significant data and methodology of addressing MSMEs in the country, the text highlights the surveys conducted by the Brazilian Institute of Geography and Statistics (IBGE), the Brazilian Micro and Small Business Support Service (SEBRAE), and the international annual research Global Entrepreneurship Monitor (GEM) a study on the entrepreneurial activity, which Brazil is part for more than 20 years. The Brazilian institutions, as well as consulting for those companies, collect key data that posteriorly become research sources. Also, when explaining how institutions chose and treated the data, they own specific methodologies regarding those businesses in Brazil. The paper also points out the importance of constant law monitoring, adjustment, and technology incentives. This article's contribution is to present a research methodology on MSME in Brazil with relevant data.

**Keywords:** Micro Business; Small and Medium enterprises; Sources and methodologies; Innovation; Entrepreneurship

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## 1. Introduction

“In Brazil, repeating what happens in the world, about 99% of the companies are formed by micro and small - MS” (Sebrae 2020), followed by medium enterprises that also play an important role in the economy. However, most academic-scientific studies do not deal with these firms, but with large companies, also national and international success cases. There are some exceptions, such as those of Dalla Costa and El Alam (2017) study, which deals with the difficulties and problems of micro and small companies when seeking their internationalization in Latin America.

What is the main challenge? It is to find sources, and adequate methodology to study micro, small and medium enterprises (MSMEs) in Brazil. Among the main sources of information and methodologies are the Instituto Brasileiro de Geografia e Estatística (IBGE, Brazilian Institute of Geography and Statistics) and Serviço Brasileiro de Apoio às Micro e Pequenas Empresas (SEBRAE, Brazilian Micro and Small Business Support Service), and the International annual research Global Entrepreneurship Monitor (GEM).

When referring to statistical data, research regarding the industry has vast literature compared with other sectors. "The survival strategy used by MSME in Brazil has been evaluated in universities with an emphasis on industry" (Lima 2010, 172). Thus, commerce and services emerged due to the country's economic growth. The Brazilian economy stabilized in the '90, “From July 1994, the *Real* plan for the economic stabilization was in force, in the following year, the Minister of Finance, Fernando Henrique Cardoso was elected president, then the Brazilian economy entered an unprecedented phase of monetary stability” (Botelho and

Mendonça 2002). Almost three-decade later, inflation is under control, and the *Real* (R\$) remains the official currency.

During an economic crisis, small firms are particularly affected. Nowadays in Brazil “micro and small companies, correspond to 52% of formal jobs in the private sector, approximately (16 million), multi-sector” (SEBRAE 2020). These firms operate in industrial, commercial, and service. In contrast, medium and large companies have the highest revenues.

In terms of categories, in Brazil, small companies are divided into micro and small. Unfortunately, worldwide, “no international consensus definition delimits the concept of micro, small and medium-sized companies due to the differences among countries, their economies, and their enterprises” (Guimarães, Medeiros de Carvalho and Paixão 2018). After legislation for micro and small companies since the ‘80s, official entities use different criteria for credit providing, taxes calculated, and rule such enterprises. “The difficulties in defining the concept of MSMEs and the weight of the informal sector in the Brazilian economy led to different views regarding companies' importance in the country's economy” (La Rovere 2001, 2).

The Brazilian legislation is essential for the economic scenario since it is intrinsically linked to corporate performance. Furthermore, the law's evolution for MSME can explain the increase in companies from the '80s until the present. Thus, due to law amendment, companies reduce bureaucracy and costs, which favors longevity and growth.

In contrast, in Brazil, business administration represents one of the main difficulties for MSME. “It is agreed that small and medium-sized companies are not organized or structured efficiently and appropriately. However, as the level of “business literacy” increases, so does the strength of small- and medium-sized companies” (Antonik 2004, 37). In Brazil, commonly, small

companies are family businesses depending on the strategy they become medium or large companies.

In 1972, was the creation of SEBRAE, the institution, became the agency in charge of supporting small firms at the national, regional, municipal, and international levels, establishing policies, and services. On the other hand, medium and large companies do not have a specific institution to safeguard their interests; most are part of a union or an association.

In the 21<sup>st</sup> century, innovation and technology became an important competitive differential to business worldwide, from the Internet of Things (IoT) to Industry 4.0, supporting the new business model. The recognition of MSME's importance seems to be linked to the so-called "Change in the technological paradigm" which prioritizes innovations (Puga 2002, 7). Innovation sometimes can be incremental, demanding low or zero investment, contributing to product improvement and cost reduction, which is suitable for MSME.

Nowadays, a technological startup is normally set up as a born micro or small company, developing critical and innovative products. In Brazil, the law improvement on MSME favored companies' longevity, using different criteria, and combining specific incentives to business. The work analysis was divided into four parts with an introduction and conclusion. The second presents the survey's available literature. The third shows a brief note regarding challenges to the continuity of micro, small and medium enterprises, the importance of legislation, companies' diversification in the 21<sup>st</sup> century as well as technological advancements.

The fourth section presents the micro, small, and medium companies' statistics, also Brazilian entrepreneurship indicators comparing with selected regions globally through the Global Entrepreneurship Monitor (GEM) research. Finally, the conclusion highlights, key sources, and

methodologies to study and understand the MSME in Brazil. All those facts reflect the need for continuous research about MSME in Brazil.

## 2. Brazilian MSME literature

The literature review explores the existing texts identifying the events that boost MSME emergence and increase in Brazil. Additionally, it illustrates the legislation improvement and challenges faced by all companies over the years. This article brings multiple sources together from official, national, and international references. The data presented synthesize historical studies published in articles, books, dissertations, thesis, mostly with an emphasis on industry, with numerous studies, since industrialization in Brazil is widely debated.

In this article, we used the IBGE database, which was established in 1934, and remains the official country's research agency. The SEBRAE database for micro and small companies was included, since they offer complementary statistics information. To analyze international entrepreneurship indicators of early-stage companies, the GEM research offers updated statistics, and Brazil is part since 2001. In the country, for the years, there were several changes in the official statistical data framework, for sample range and indicators, favoring a hard-working comparison across periods.

The information has been reported without judgment, using reliable texts by economic, business historians, and in deeper academic studies available on a scientific data basis. The main authors consulted were (Morais and Pereira 2020, Espósito 2017, Silva and Fernandes 2003, Curi and Saes 2014, Suzigan 2000b; Grandi 2016, Marson 2015), among others.

Specific topics, such as finance, planning, consulting, management, decision-making, entrepreneurial activity, social responsibility, environmental, innovation, linked with MSME performance, are available in a wide range of electronic journals and articles by area.

### 3. Micro, Small and Medium Enterprises in Brazil

Between the 19<sup>th</sup> and beginning of the 20<sup>th</sup> centuries, small firms were predominant in Brazil, while medium and large firms were quite a few. During the period, companies, as much as the country, were in development. Credit was rare and expensive, there was a lack of qualified employees and legislation supporting companies.

In Brazil at the time, the southeast states (São Paulo, Rio de Janeiro, Minas Gerais, Espírito Santo), were more advanced than the rest of the country.” between 1911 and 1913 also in 1919, while the manufacturing industry grew at an average annual rate of 4.4%, only São Paulo reached 7.5%. Between 1920 and 1928, these respective rates were 4.4% and 6.6%” (Cano 2015, 447). Until the present, the São Paulo state remains the most industrialized, housing company of all segments and sizes considered the Brazilian financial center.

In the past, the Brazilian economic and political scenarios were based on changeability. Combined with global issues, such as World War I (1914-1918), followed by the New York stock market crash (1929), influenced the country’s development. Nevertheless, in this period, companies continued to be set up. “Through the Depression Decade, therefore, Brazil continued significantly in its industrialization” (Malan et al. 2000).

In the subsequent period of World War II (1939-1945), also several global crises in alternating periods, have affected the national economy. Import substitution and population growth influenced the development of manufacturing, demanding finished products. “The sequence

Craft-Manufacture-Industry was sometimes associated with the development of industry in Brazil, although this was done without greater empirical basis” (Saes 1989, 36). The MSME stood out, playing a fundamental role contributing to the country's development. In the 20<sup>th</sup> century, industrialization was responsible for boosting Brazil’s growth. “Until 1939, the textile manufacturing industry was the most important in Brazil” (Suzigan 2000a, 129). Furthermore, the textile also contributed to home-based sewing production. “Previously, there was the hat, shoes, sugar, beer, phosphorus, metal mechanics, cement, steel, paper, cellulose, rubber, chemicals, and pharmaceuticals industries” (Suzigan 2000a, 176-324).

For over 45 years, there was an effort to structure public policies for MSMEs in Brazil. However, recently, MSME received more attention, according to their national economy participation and importance growing in modern production structures. Public policies for MSME are supported through the institutions, legal framework, and specific tax rules promoting them. Public institutions support the productive system, official banks, development agencies, research institutes, and universities favor companies (Naretto, Botelho and Mendonça 2004).

The Brazilian continuous industrialization was improved in the '50s. For example, “due to the automotive industry settled in the country, the number of auto parts companies increased to 118 in 1957. Most of these firms were formed by MSME” (Fernández de Sevilla and Dalla Costa 2019, 8). The sharp increase in job positions demanded labor regulation, which integrally took place, organizing the economic sector.

“The 1951/1953 currency crisis, therefore, represents an important milestone in the evolution of Brazil's post-war economic history” (Malan et al. 1980). In 1988, through the Federal Constitution legislation designed especially for MSME took effect. Between 1988 and 2018, some laws simplified companies’ operations, and tax collection, reflecting in the MSME daily administration as presented in Table 1.

**TABLE 1.** Brazilian legislation for MSMEs in the 20th and 21st centuries

1988 Federal Constitution, 1988 Articles No.170 and 179. Differentiated solutions for micro and small businesses.	2008 Complementary Law No. 128 of 2008, created the Micro Empreendedor Individual (MEI, Individual Micro-Entrepreneur) in force since July 2019.
1996 Law No. 9.317 of 1996: instituted the Simples Federal (Simple Federal) tax regime.	2009 Complementary Law No.133 of 2009: includes the cultural sector in Simples Nacional (Simple Nacional) tax system.
2003 - Proposta de Emenda à Constituição (PEC, Constitutional Amendment Proposal) No.42.	2011 - Complementary Law No. 139 of 2011: corrects the ceilings of Simples Nacional (Simple Nacional) tax system; debt installments; stimulates exports.
2006 Complementary Law No. 123 of 2006: Establishes the National Statute of Micro and Small Business, also known as the General Law of Micro and Small Business.	2014 Complementary Law No.147 of 2014: allows all activities in Simples Nacional (Simple Nacional) tax system.
2007 Complementary Law No. 127 of 2007: improvement in the General Law.	2016 Complementary Law No.155 of 2016: extends the ceiling of Simples Nacional (Simple Nacional) tax system.
2007 Law No. 11,598: creates the National Network for the Simplification of Registration and Legalization of Companies and Businesses.	2018 Complementary Law No.162 of 2018: <i>Pert-Sn</i> is the Special Tax Regularization Program for Micro and Small Companies opting for Simples Nacional (simple national) tax system.

Source: Own elaboration based on Naretto, Botelho and Mendonça (2004) also official legislation.

Over the past thirty years, the twelve main laws implemented aimed to regulate MSME's operation in Brazil, especially to the Simples Nacional (simple national) tax regime, in which nine taxes are grouped, tax savings can reach up to 40% depending on the company's segment and revenue, using a single tax form for monthly payment. "Brazil has 92 different taxes" (Portal Tributário 2020), divided into national, regional, and municipal; the current tax system is one of the most complex and bureaucratic globally, difficulties companies' growth.

Between 2010 and 2014, the companies' survival rates up to two years went from 54% to 77%. This improvement is related to Micro Empreendedor Individual (MEI, Individual Micro-Entrepreneurs) companies. When MEI is excluded from the analysis, the survival rate grows from 54% to 58%. The MEI has a positive impact on the company's survival

rate since their participation between 2008 and 2012 increased from 0% to 63% of all companies (SEBRAE 2014).

In Brazil, specific legislation for MSME favored the increased number of companies. In 1985 there were 1,065,027 firms, including micro, small, medium, and large (RAIS 2020). After 35 years, in 2020, more than five million businesses are operating, apart MEI companies. In recent years, opening a business in Brazil became less difficult, although starting a company is far from ideal.

By the primary Law No. 128 of 2008, for MEI enterprises take less than thirty minutes for business registration, thus, this option is supportive during the COVID-19 pandemic recession,<sup>1</sup> being an alternative to unemployed. Professionals such as confectionery, hairdressers, bricklayers, among others, can be an entrepreneur, operating in their own home as local of work. “In 2020, Brazil has 10.6 million MEI registered” (RFB 2020).

The simplified tax regime for MEI, reserves some advantages, such as contributing to social security, getting credit in Federal, private banks, or angel investors with special interest rates and payment terms. In the MEI tax regime is not mandatory to report information in the *Relação Anual de Informações Sociais* (RAIS, Annual List of Social Information) “unless the company has hired at least one employee” (Planalto 2006). In Brazil, the IBGE's report is the primary source for companies' performance, data are retrieved from RAIS, this program was

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<sup>1</sup> From March 2020, in Brazil, many people lost their jobs. "Since the COVID-19 pandemic arrived in Brazil, 716,000 companies have closed their doors" (El País 2020). From this total, "at least 600,000 micros, and small businesses also 9 million employees were laid off due to the economic effects of the new coronavirus pandemic" (CNN Brasil 2020). The pandemic is still far to the end, with the virus circulating worldwide. Vaccination in Brazil started in January 2021, people from vulnerable groups are priorities since the pandemic is at the highest level of contagion in the country.

implemented in 1975, which monitors compliance with labor legislation, social security contributions, and verifies the Brazilian employment situation.

### 3.1. Brazilian MSMEs in the 21st century

By the early 21<sup>st</sup> century, regulations, banking, legislation, financing, and support policies specific for MSME in Brazil, were established nevertheless, some measures have been implemented for innovation and technology. There were only amendments to the existing legislation. Between 1996 and 2001, a new type of company emerged worldwide named “startups.” One of the definitions “is a young company with a repeatable and scalable business model, in a scenario of uncertainty and solutions to be developed”(StartSe 2020). Generally, are technological-based companies, most are MSME, can speedily become large, some of them born global, arousing interest from major investors worldwide.

“In 2020, startups in Brazil were representative, with 13,038 enterprises” (StartupBase 2020). One of the characteristics of this business is the accentuated uncertainty about success, sometimes generating high expectations in the entrepreneurs. In Brazil, “the states with the largest number of startups were São Paulo (3,840), followed by Minas Gerais (1,105), the Rio Grande do Sul (930), Rio de Janeiro (847), and Paraná (655)” (StartupBase 2020). Some policies related to technology, combined with business networks favor startups to emerge. “The startup's highest performance segment in the country is education with 7.19%, followed by finance, 4.27%, health and well-being, 3.86%, internet 3.46%, and agribusiness 3.19%” (StartupBase 2020).

In Brazil, the MSME legislation improvement allied to incentives on innovation and technology, also the partnership between universities, institutes, private companies, incubators,

international connections, such as Silicon Valley, has contributed to the startup's growth. The Brazilian unicorn, are successful startups, reaching eleven companies in 2020: a) Ebanx (global fintech ); b) 99 taxis (mobility solutions); c) PagSeguro (financial services); d) Arco Educação (education); e) Gympass (wellbeing and gym); f) NuBank (financial services); g) Wildlife Studios (virtual games); h) Movile (delivery and several other segments solutions); i) Stone (national fintech); j) Loggi (delivery solutions); k) Loft (real state), evaluated in more than US\$ 1 billion each (*Forbes Magazine* 2020).

It is a significant achievement for Brazil. “Unicorns companies set a vision for growth, use technology to automate and scale, using artificial intelligence (AI), to innovate” (Salesforce, 2021). The Ebanx company operates in more than eight countries and has more than 700 employees in Brazil and abroad (Ebanx 2020). Job creation could be alone an indicator of these companies’ importance to Brazil.

### 3.2. Innovation, Technology and Credit

In the globalized and competitive economy, innovation can be a difference in MSME growth and survival. Without investment in technology, Brazil is going to remain a technology follower, preventing competition with developed economies. The Brazilian innovation law favored the emergence of the Scientific, Technological, and Innovative Institutions (ICT), which is a non-profit institution for scientific, technological research, for new products, services, and processes.

Moreover, the law supported the establishment of the Technological Innovation Center (NIT) responsible for managing institutional innovation policies. By sixteen years ago, the Federal

Government established legislation incentivizing technology and innovation, as presented in Table 2.

**TABLE 2.** Incentive for Innovation Laws in Brazil

<b>GOVERNMENT PROGRAM</b>	<b>LEGISLATION</b>
Innovation Law: a) creating an environment conducive to strategic partnerships between universities, technological institutes, and companies; b) encouraging the participation of science and technology institutes in the innovation process; c) stimulating innovation in the company.	Technological Innovation Law No. 10,973/2004 <sup>2</sup> , Modified by Law No. 13,243 / 2016
<b>GOVERNMENT PROGRAM</b>	<b>LEGISLATION</b>
<i>Lei do Bem (Good Law)</i> : a) some of the tax deduction, also innumerable topics offering benefits to companies' development. Seeks to encourage the activities of technological research and development of technological innovation (RD&I).	Law No. 11,196/2005 <sup>3</sup> ,

Source: Author's elaboration based on (ANPEI 2017, 25).

The Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA, Brazilian Agricultural Research Corporation) is a public research company internationally recognized as a reference in assisting companies in agribusiness research linked to the Ministry of Agriculture. "The Innovation Law intended to open possibilities for technological discoveries, being created in government-supported specialized research centers, such as Embrapa and Fiocruz" (Naretto, Botelho and Mendonça 2004).

In Brazil, the collaborative and innovative network is growing steadily, in partnership with universities and research institutions. For micro and small companies, the SEBRAE offers free online training, seminars, workshops, credit, and specific programs; "some of them are personalized such as Agente Local de Inovação (ALI, Local Innovation Agents); subsidized

<sup>2</sup> Available at: [http://www.planalto.gov.br/ccivil\\_03/\\_ato2004-2006/2004/lei/110.973.htm](http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2004/lei/110.973.htm)

<sup>3</sup> Available at: [http://www.planalto.gov.br/ccivil\\_03/\\_ato2004-2006/2005/lei/111196.htm](http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2005/lei/111196.htm)

technological consultancies (SEBRAETEC), business incubators, innovation, technology, trademarks, patents, and technical standards support” (SEBRAE 2020).

The Confederação Nacional das Micro e Pequenas Empresas e Empreendedores Individuais (CONAMPE, National Confederation of Micro and Small Enterprises and Entrepreneurs), also supports micro and small companies at a national level, offering several services such as free e-commerce platform development, credit line, export training, among others (CONAMPE 2020).

The Banco Nacional de Desenvolvimento Econômico e Social (BNDES, National Bank for Economic and Social Development) is a Government Institution that offers specific credit lines for all size companies (BNDES 2020). The misinformation about how to obtain a loan prevents MSME to access credit in the BNDES. “In Brazil, for example, there are several special financing lines for small companies. Nevertheless, the requirement to keep up with tax obligations to obtain credit excludes most MSMEs” (La Rovere 2001, 2-3).

#### **4. Employability indicators and company’s performance in Brazil**

The IBGE is the primary institution for Brazilian statistics also providing data for the Cadastro Central de Empresas (CEMPRE, Central Register of Companies). The “CEMPRE covers business entities, public administration bodies, and private non-profit institutions” (IBGE 2020a, 11). Thus, it covers all organizations registered in the Cadastro Nacional de Pessoa Jurídica (CNPJ, National Register of Legal Entities) since all formal companies have a CNPJ tax control number.

The report is yearly published, and the most recent is from 2018 made available in July 2020, the report presents an overview of companies, employed personnel, partners, and monthly average wages in Brazil. The study uses some of the sources previously mentioned:

Annually the economic data and registration updated by CEMPRE combine information from the IBGE recovered from annual company's survey for Industry, Construction, Commerce, Services and from the Sistema de Manutenção Cadastral de Empresas (SIMCAD, Cadastral Maintenance System of the Central Register of Enterprises), RAIS and the Cadastro Geral de Empregados e Desempregados (CAGED, General Register of Employed and Unemployed), they are all administrative mandatory records of the Ministério do Trabalho (Ministry of Labour) (IBGE 2020a, 11).

Table 3 shows an overview of companies, employees, and employers for all size companies between

**TABLE 3.** Companies, salaries, and employment in Brazil (2017-2018)

Variable	2017	2018	Relative Variation (%)
Companies and other organizations	5,029,109	4,937,861	(-) 1.8
Total employed staff	51,939,251	52,217,587	0.5
Salaried employed personnel	45,070,312	45,456,277	0.9
Partners and Owners	6,868,939	6,761,310	(-) 1.6
Average monthly salary (R\$) (1)	2,946.49	2,952.87	0.2

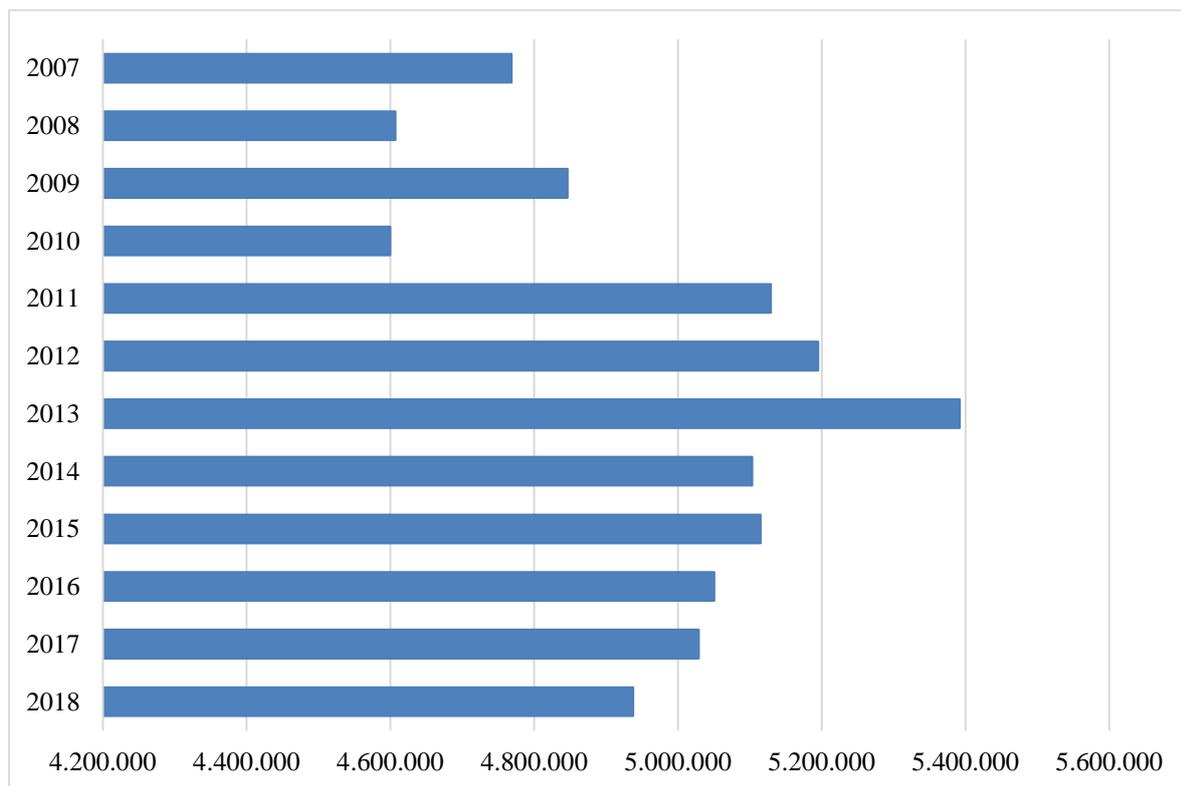
Source: Author's elaboration based on CEMPRE's study (IBGE 2020a).

Comparing 2018 to 2017, a negative balance of 91,248 companies closed their activities, although a positive number of 278,336 new job positions. In 2018, there were 385,965 salaried workers, with an average salary of R\$ 2.952,87, corresponding to about US\$ 766.58. In 2018, the national minimum wage in Brazil corresponded to R\$ 954,00, around US\$ 247.66. In the majority, Brazilian workers have a monthly minimum wage, preventing a good quality of life. Usually, workers have a low-level education, also work for micro and small companies.

On the other hand, medium and large companies pay more than a minimum wage. Multinationals usually have the highest salaries, depending on the sector, such as automotive,

that share profit yearly. In 2018, there was a reduction in partners and owners, 107,629 executives, which can be linked to the companies' survival. Figure 1 shows the company's evolution and other organizations from 2007- 2018.

**FIGURE 1.** All size companies and other organizations' evolution 2007-2018

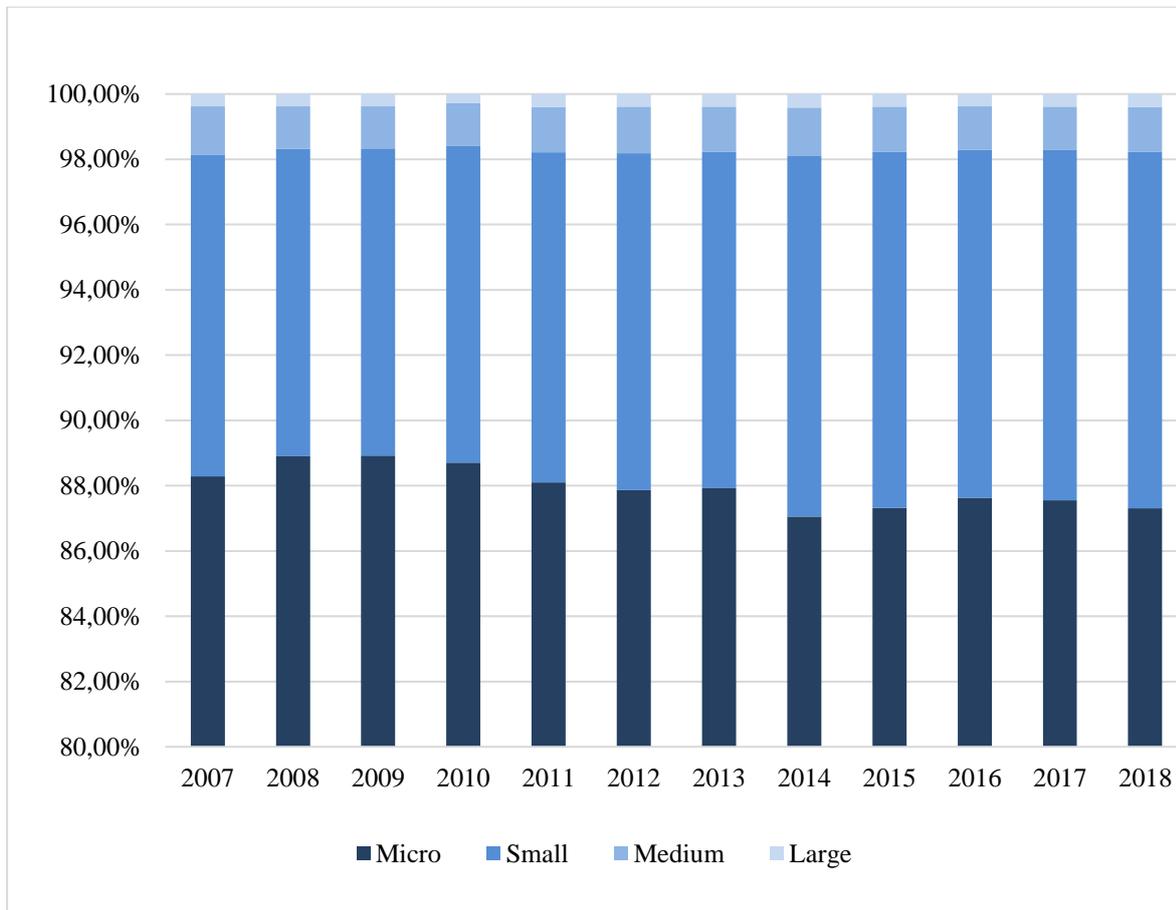


Source: Author's analysis based on the CEMPRE study (IBGE 2020a).

In Brazil, between 2007 and 2018, the best year for new companies was 2013 with 5,392,234. In terms of variation from one period to another, 2011 (5,129,205) had the most significant growth in volume when compared to 2010 (4,599,880), representing 11.5% raise, this represents 529,325 new companies, co-related to new job positions. On the other hand, 2008 (4,607,261), 2009 (4,846,639), and 2010 (4,599,880) were the least favorable years and could be related to the US subprime crisis in 2007. The global crisis effects can extend through the

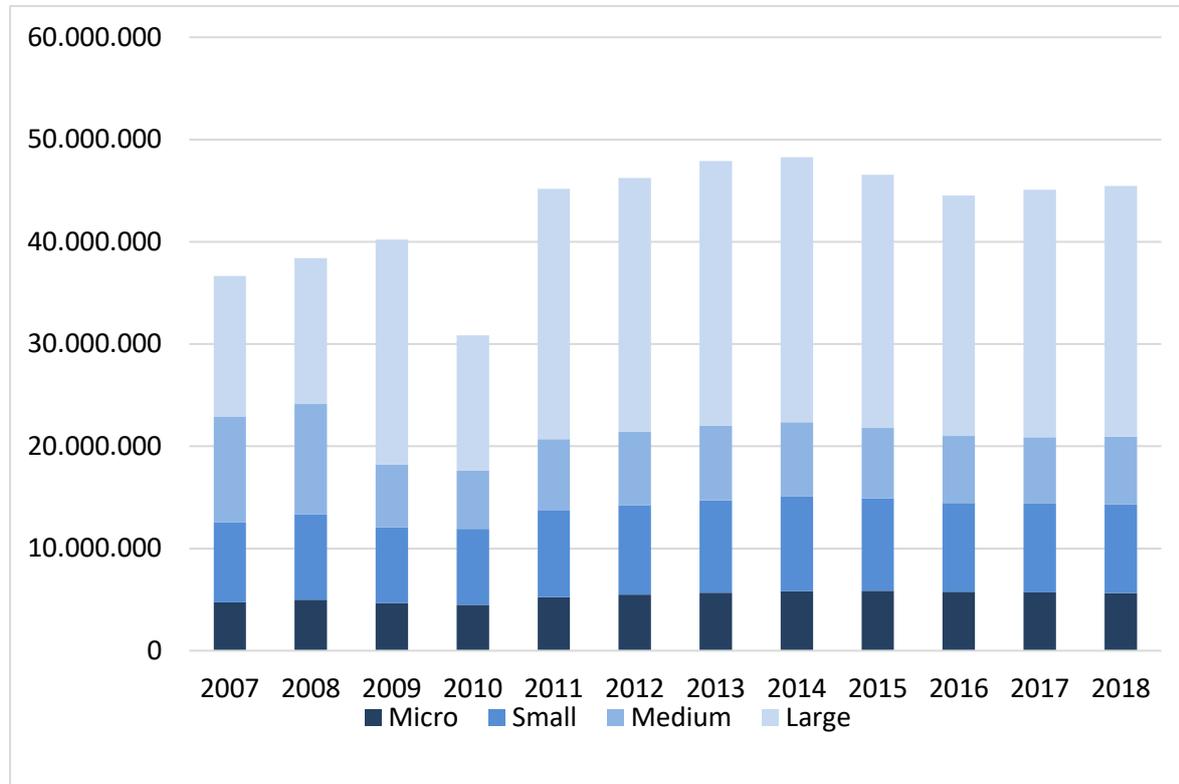
years, depending on the country's economic situation. Figure 2 presents the companies' market share from 2007 to 2018.

**FIGURE 2.** Micro, Small and Medium companies' share in Brazil (2007–2018)



Source: Author's elaboration based on the CEMPRE study (IBGE 2020a).

In the Brazilian economy, micro-companies are the majority an average of 87%, followed by small with 11%, medium 1.4%, and large 0.39%. Micro and small companies together represent 98%, while medium and large, represents 2%. Between 2007 and 2018, for all size companies, the variation was slightly stable due to economic flow. In terms of employment. Figure 3 shows the employability for 2007 to 2018 by company.

**FIGURE 3.** Employees by Companies' Size, 2007-2018

Source: Author's elaboration based on the CEMPRE study (IBGE 2020a).

Between 2007 and 2018, about 916 million Brazilian were employed in the industry, commerce, and service, an average of 83 million per year. For the period, large companies had most of the employees, over 472 million, followed by small companies with 179 million, the medium 149 million, and the micro-companies with 113 million.

Although legislation has been improved over the past few years, especially for small companies, taxes on hiring employees are still high impacting employment, therefore, the growth of informality and the number of unemployed does not decrease. "Economic and financial sustainability are essential elements for the organization's success" (Antonik 2004, 38). Thus, to operate a business in Brazil has been necessary a strict control of tax since direct and indirect costs are intrinsic to the operation.

Therefore, to monitor Brazil's informal economy, the IBGE conducted surveys through the Pesquisa Nacional por Amostra de Domicílios (PNAD, Continuous National Household Sample Survey). In the quarterly research and for this article, the period available was from April to June 2020, showing the current situation. According to the IBGE, “in this period, the number of workers in informal employment was (8.6 million people) a decrease of 21.6% when compared to the same period of 2019” (IBGE 2020b,5).

In the informal economy, workers do not have a formal contract, excluding employer obligation in tax payment. This job condition impacts the county's economy in several areas, such as workers' health conditions. “In the category self-employed, for the same period, showed some 21.6 million workers, 10.3% reduction in comparison to the previous quarter of 2019”(IBGE 2020b,5-6).

The self-employed reduction could represent the migration to MEI, while cross-referencing information between sources could confirm this hypothesis. Self-employed, as “domestic workers, are estimated at 4.7 million, with a reduction of 21.0% in 2020. For this job category, informality is high since families have no intention of paying several social taxes. Brazil is a continental country, with 26 states and a Federal District, totaling 5.570 cities with regional differences, social inequalities, and systemic corruption, facilitating informality impacting the economy. For international data, from now on, we will use GEM research, analyzing the Brazilian entrepreneurship level.

#### 4.1. Global Entrepreneurship Monitor – GEM, 2019-2020

The 2019 GEM survey is the most recent, in which some indicators were analyzed, including the Brazilian performance, compared with worldwide specific regions. The research

interviewed the economically active population from 18 and 64 years old that were engaged to start or manage a new business. The leading indicator is the “Total Early-Stage Entrepreneurial Activity (TEA), a qualitative indicator offering a country overview” (GEM 2020, 29).

For over 19 years, some countries are in the research, such as Brazil, the United States of America (USA), the Netherlands, and the United Kingdom (UK). In the 2019 report, 50 economies were researched, grouped into four regions, as defined by the World Economic Forum: a) the Middle East and Africa; b) Asia and the Pacific; c) Latin America and the Caribbean; d) Europe and North America (GEM 2020, 27). The countries were divided into low, medium, and high-income groups, assessing performance against some indicators.

Research points out that “in 36 of the 50 economies, more than half of the population consider that they have the skills, knowledge, and experience to start their own business. While 42 of the 50 economies, less than half of those who see opportunities, would be deterred by fear of failure” (GEM 2020, 14). Brazil is one of the economies in Latin America with high entrepreneurship participation. “Within the 50 economies participating in the 2019 GEM research, the six highest levels of TEA were all in the Latin America & Caribbean region” (GEM 2020, 14).

The survey indicates that the TEA between 2001 and 2019 increased from 14% to 23% in Brazil; from 11% to 17% in the USA; from 6% to 9% in the UK from 6% to 10% in the Netherlands (GEM 2020, 73-74). In general, Brazil has increased nine points in entrepreneurship, even considering all difficulties in doing business, while developed countries have improved at most three or four points in 19 years. In Latin America, Brazil was the country with the largest population and territorial extension among countries. “Also concerning the

TEA, only Spain did not experience an increase during the analyzed period 2001 to 2019” (GEM 2020, 73-74). Table 4 presents the entrepreneurship development in each region, through the interviewees in Latin America and the Caribbean countries.

**TABLE 4.** Survey results with Latin American and Caribbean countries TEA

Question surveyed	The proportion of adults aged 18-64 years, who agree with the question surveyed in Brazil and Puerto Rico, Chile, Colombia, Guatemala, Mexico, Ecuador, and Panama
Ease of starting a business in my country (% of adults)	In Brazil, 44% believe it is easy to start a business. The highest index is in Panama, 55%, and the lowest in Puerto Rico, 22%.
Have knowledge, skills, and experience to start a new business (% of adults)	Brazil has about 63% of the requirement. Ecuador's best country, with around 80% of the requirement and the lowest in Puerto Rico, is approximately 55%.
There are good opportunities in the country, but I would not open a business for fear of failure (% of adults)	In Brazil, over 35% are afraid of failing. In Chile, almost 60% do not believe it is safe, and Colombia is more fearless in opening a business, approximately 31% is just afraid of failing.

Source: Author's elaboration based on (GEM 2020, 30-32).

The research shows that Brazilians feel prepared to open a business, although are afraid of failing when compared to the other analyzed countries, some of the reasons could be, the unstable economy, high interest, and indirect tax. Thus, being an entrepreneur in Brazil demands knowledge and cash flow. “In most economies, encouraging people to start a business

is an important and common political objective. Anyhow, transforming these startups into financially sustainable businesses, in the long run, is also important” (GEM 2020, 36).

Table 5 shows the worldwide TEA result, which means, the proportion of adults between 18 and 64 years old, that started a business recently. The indicator is usually linked to micro and small companies.

**TABLE 5.** Survey results concerning the TEA for specific regions

Regions	Total entrepreneurial activity rate (TEA) at an early stage (% adults) 18-64 years
Latin America, and the Caribbean (Brazil, Puerto Rico, Chile, Colombia, Guatemala, Mexico Ecuador, and Panama)	Brazil has over 22% of people with recent businesses. In the region, Ecuador and Chile have the highest entrepreneurship rates at 37%, and Mexico has the lowest at about 12%.
Asia, and the Pacific (Pakistan, Japan, China, Australia, India, South Korea, Armenia, and Taiwan)	Armenia has the highest rate, 21%; Armenians have started a new business in the evaluation period or have a recent establishment; the lowest is Pakistan at over 4%, followed by Japan at 5%.
Europe, and North America (Italy, Poland, Spain, Belarus, Macedonia, Germany, Slovenia, Sweden, Greece, Norway, Russia, the UK, Switzerland, Luxembourg, the Netherlands, Croatia, Cyprus, Ireland, Portugal, Slovakia, Latvia, the USA, and Canada).	In Europe, Italy had the lowest rate of entrepreneurship, approximately 3%. The best performance was from Latvia, 16%. The USA undertook 17% and Canada, about 19%.
The Middle East and Africa (Egypt, Oman, Jordan, Iran, South Africa, Morocco, Israel, Saudi Arabia, Qatar, United Arab Emirates, and Madagascar)	In the region, Egypt had the worst performance with around 6%. Madagascar undertook 20% of the largest in the region. Iran, South Africa, and Morocco, nearly 11% of new developments performed practically the same.

Source: Author’s elaboration based on research data (GEM 2020, 36-37).

Entrepreneurs have different motivations and aspirations to open a business; for example, in Latin America and the Caribbean, the Middle East, and Africa, more than 80% of entrepreneurs start a business since jobs were scarce. In Brazil, this is a fact, by higher unemployment tax.

“In other regions, over 40% have the same motivation. While in the Middle East and Africa alone, 80% undertake, motivated to generate wealth and high income” (GEM 2020, 36-37). Regarding women entrepreneurship worldwide, GEM research shows the result divided into regions. “It is important to highlight that the 2019 GEM research shows that Japan also has the lowest share of adults seeing good opportunities to start a business, about 10, indicating a prevalence towards other forms of income generation” (GEM 2020, 14). Thus, to know more regarding women's participation in business, Table 6 presents the sharing in selected regions.

**TABLE 6:** Worldwide Initial entrepreneurship by gender

Region	Woman	Men
Latin America and the Caribbean (Brazil, Puerto Rico, Chile, Colombia, Guatemala, Mexico Ecuador and Panama.)	1% up to 34%	1% up to 42%
Asia and the Pacific (Pakistan, Japan, China, Australia, India, South Korea, Armenia, Taiwan).	1% up to 16%	1% up to 25%
Europe and North America (Russia, the UK, Switzerland, Luxembourg, the Netherlands, Croatia, Cyprus, Ireland, Portugal, Slovakia, Latvia, the USA and Canada)	1% up to 16%	1% up to 23%
The Middle East and Africa (Egypt, Oman, Jordan, Iran, South Africa, Morocco, Israel, Saudi Arabia, Qatar, United Arab Emirates and Madagascar).	1% up to 18%	1% up to 19%

Source: Author's elaboration based on research data (GEM 2020, 56).

In all analyzed regions, women have significant participation in business, a worldwide achievement for women, while in Latin America and the Caribbean, men and women are very similar in terms of entrepreneurship. “In Mexico, Brazil, Spain, and the USA, high female participation increases the overall rate of TEA” (GEM 2020, 57). The Middle East and Africa are the second regions with the most entrepreneurial women. In Brazil, traditionally women start a home business, while handcraft and sweets are preferred. In the Brazilian economy, frequently, women being the only ones working, not only for the social inequality but also for family difficulties. Even so, statistics could be better since women are the majority in several

countries. “In 2019, the rates of initial entrepreneurs by gender were slightly closer, approximately 23.1% for women and 23.5% for men” (GEM 2020, 89).

## 5. Final considerations

This article's contribution is to present the sources and methodologies for the study of micro, small and medium enterprises in Brazil, also, highlighting the importance of the main institutions in the elaboration of methodologies, such as IBGE and SEBRAE and the international annual research Global Entrepreneurship Monitor (GEM). The database is permanently updated by these institutions, which explains how data is collected, elaborated, and therefore, aiding the understanding of the MSME study in Brazil. For MSME just in the ‘80s, specific legislation allowed companies to grow steadily.

Articulations for a differentiated law started through policies, the result was the implementation of the micro and small company statute and Simples Nacional (Simple National) tax regime. The specific legislation for MEI, offers agility for business, allowing the democratization of credit improving the cash flow. The Brazilian society became politically and socially integrated, promoting development amid successive national and international crises, while currency stabilization happened in 1994.

The Innovation Law or Lei do Bem (Good Law), also contributed to technology and innovation incorporation in companies, favoring the collaborative network; the 4.0 Industry as well as the Internet of Things (IoT), became an opportunity for business improvement in the 21<sup>st</sup> century, influencing manufacturing. Several startups emerged, playing a leading role in the last decade; some of those companies became an international unicorn, generating jobs in Brazil also

worldwide. Through financial credits, national institutions, federal banks' support, was mandatory for companies' investment and growth, contributing to the local economy.

Political turmoil, excessive bureaucracy, high costs, and charges for various activities, including credit, social inequalities, lack of investment in infrastructure, and unemployment need a long-term to be improved. Brazil for over the years is in constant improvement, overcoming several national and international crises that impact especially Brazilian MSME.

This article provides evidence that even with the challenges, Brazil has improved the number of companies, increased the quantity of new MEI companies by more than ten million, also increase MSME participation in the economy since they are the majority. Through the international survey GEM, it was possible to know the Brazilian willingness to undertake any business highlighting the representative participation of women. Also, suggest the necessity of research about MSME continuously.

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