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Articles

Foreign Direct Investment and Multinationals in Brazil (1860-1913)

Investimentos Estrangeiros Diretos e Multinacionais no Brasil (1860-1913)

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Abstract. Foreign direct investment (fdi) in Brazil, started in the 19th century, a transition period between the Empire and the beginning of the Republic (1860-1913), when fdi theories had not yet been formulated. The British were the main investors worldwide, also in Brazil, responsible for developing essential sectors. In addition to the Europeans, the Americans also saw opportunities in the country, contributing later to the industries' installation. To better understand foreign investments in Brazil, as well as the installation of multinationals in the transition from the Empire to the Republic, we highlight the foreign investment process and the country's industrialization. The main contribution of this work is research pointing out the historical landmark of foreign investment in Brazil in the analyzed period, allowing to understand the country's urban and social development.

Keywords: foreign direct investment; industrialization; internationalization.

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Resumo. O Investimento Estrangeiro Direto (ied) no Brasil teve início no século XIX, período de transição entre o Império e o início da República (1860-1913), quando as teorias do ied ainda não haviam sido formuladas. Os britânicos foram os principais investidores mundiais, também no Brasil, foram os responsáveis pelo desenvolvimento de setores essenciais. Além dos europeus, os americanos também viram oportunidades no país, contribuindo posteriormente para a instalação das indústrias. Para melhor compreender os investimentos estrangeiros no Brasil, bem como a instalação de multinacionais na transição do Império para a República, destacamos o processo de investimento estrangeiro e a industrialização do país. A principal contribuição deste trabalho é a pesquisa que aponta o marco histórico do investimento estrangeiro no Brasil no período analisado, permitindo o entendimento do desenvolvimento urbano e social do país.

Palabras clave: investimento estrangeiro direto; industrialização; internacionalização.

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INTRODUCTION

From a historical perspective, foreign direct investment (hereafter FDI), is a common practice worldwide, even during a period without economic theories. Researching FDI in Brazil, during the Empire's transition to Republic, recovers the historical period (1860-1913), whereby infrastructure was almost inexistent. Without national financial resources, foreign investment was welcome, at that period, the main international investor was Great Britain. During the empire, Brazil was an agrarian country, the primary international activity was commodities' export, especially coffee and rubber, favoring international commerce.

According to Chandler & Mazlish (2005, p. 2) "manufacturing plants in Brazil started later, as would the presence of multinationals. The first wave of multinationals in the modern economy began in the 1880s, following the Industrial Revolution". It took a new shape in the second wave in the 1970s, both in numbers and in the power of multinationals. The first stage of internationalization in Brazil, FDI meets the period of industrial development, financing both infrastructure and companies, called productive investment.

In terms of population, "until 1900, Brazilian was about 18 million" (Instituto Brasileiro de Geografia e Estatística [hence forward IBGE], 2000), with a significant native indigenous. Between 1860 and 1913, there was also, a growing community of slaves from Africa and later, millions of immigrants arrived. In general, immigrants were both investors and workers. "Investments include those led by England from the second half of the 19th century, followed by France, Germany, the Netherlands, and the United States of America in ports, railways, hydroelectric plants, public lighting systems in Argentina, India, Brazil, Canada, and other countries" (Magnoli, 2004, p. 54). The British remained in Brazil for an extended period, investing in all countries, prioritizing infrastructure, especially in the period analyzed by the text.

The primacy of English investment also multinationals, came from the inclusion of machines in the processing of raw materials, and wages to a new class of workers, emerging in Europe. Since then, English has expanded internationally, dominating FDI as well as increasing the operations abroad through multinationals. "In 1913, British foreign assets amounted to about 180%

of Britain's GDP, whose capital was invested on five continents. French capitals were more restricted in scope, targeting Russia, North America, the Iberian Peninsula, and Africa" (Magnoli, 2004, p. 54). Part of this investment was in railways, mainly from 1876 to 1885. "In this case, England comes ahead with 88% of this investment, France with 10% and other countries 2%" (Renault, 1987, p. 79).

Specifically, for rubber, "Brazil produced 16 394 tons in 1890 and 44 296 tons in 1911. This period, until shortly after the First World War, was the most important for the country's production and exports. Brazilian production, coming from the natural forest, was replaced by large plantations in Ceylon, Malaysia, Java, Sumatra, India, Brunei, Indochina, and so on, that started to produce from 1900, reaching the peak of production after the end of the First World War (1914-1918)" (Fonseca, 1970; Soares, 1927). The Amazon region in North of Brazil, was the largest latex production, the main raw material for rubber for a long period, before the Asia expansion and Brazilian decline. "Commodities, especially coffee, aroused interest from the United Kingdom and France. On the other hand, services represented 59% of FDI, and the manufacturing industry accounted for only 4% of total investments" (Curado & Cruz, 2008, pp. 399-431). The country's economic structure has changed over the years, but at a slow pace, due to investment demand in various society areas.

The export agenda in Brazil would be changed significantly only in the 20th century, from the consolidation of manufacturing industries, both national and international. "In 1881, there were 44 textile factories, but only 3 000 workers employed in them" (Renault, 1987, p. 79). Some events as Industrial Revolution in Europe, the international economy, new industrial and commercial companies, contributed to Brazil becoming one of the main FDI destinations. "At least on the railway lines, Brazil followed the path of modernity, although most of the 'national' railways were, in fact, owned by British companies" (Bueno, 2008, p. 67).

Railway was decisive for development in several countries especially in Europe, where Britain was the substantial investor. "The railways have had a great boost since their inception. In 1830 there were some tens of kilometers around the world. In 1840 there were more than 7 thousand kilometers and, in 1850, more than 37 thousand. In addition, most of the capital, iron, machinery, and technology were British. In 1848 a third of the capital on the French railways was English" (Hobsbawm, 2012, p. 85). In Brazil, infrastructure and investment in industries were mandatory for development, without both, the country could not grow economically.

From 1860 until 1913, the main investors in Brazil were Europe and North America, later other economies invested diversifying inbound capital. "The first of these features was because Brazil, together with the rest of Latin America, constituted at the time a part of what Eric Hobsbawm has called the informal British Empire" (Szmrecsányi, 2002, p. 23). Over the years, investment in infrastructure and services, was the priority, although Brazil was abundant in raw material, there was a lack of machines and qualified workers, being necessary to bring foreign specialists, leading from Europe.

This article presents a historical Brazilian's development through FDI between the Empire and the beginning of the Republic, highlighting the importance of foreign investment and its contributions to Brazilian economic growth. In addition to the introduction and conclusion, it has five other parts. The second presents FDI and reasons to invest abroad. The following illustrates the investment of multinationals and industrialization in the transition from Empire to Republic

(1860-1913). The fourth part shows the amount of FDI (1860-1913) and its origin. The fifth, reports the foreign investment sectors. The last, features multinationals were operating in Brazil between 1860-1913, as well as some that remain in operation.

FOREIGN DIRECT INVESTMENT: REASONS TO INVEST ABROAD

During the Empire's period (1822-1889), as in the Old Republic (1889-1930), Brazil used manual and rudimentary processes in small factories and artisanal industry. Brazil needed internal development in several areas, "and in an attempt to move in this direction, the government, through a license in 1809, granted customs exemption for indispensable raw material to the factories, exempting from taxes the export of manufactured goods produced in Brazil" (Confederação Nacional da Indústria [hence forward CNI], 2008). Years before, the government was worried about facilitating the development.

About factories' construction in Brazil, "in the early years of the 19th century, the first steel mills were installed in Minas Gerais and São Paulo. The iron factory in Serro Frio (MG), São João de Ipanema Steel Mill (Sorocaba, SP), Brazil's first large furnace, at the Prata factory in Congonhas-MG" (CNI, 2008). Industry transformation started, although there was a lack of machined material, labor, machinery, technology, and formal industrialization policy to boost infrastructure.

According to Renault (1987, pp. 82-83), "in terms of industrial establishments, in 1889 there were about 640 industrial enterprises, six years later (1895) this number increased to 1 088, yet Brazil was still in the pre-industrial phase". Industrialization in Brazil would start to develop effectively only through the base industries' creation. "The limitation for the full development of the Brazilian industry was the lack of fuel to be used in steel furnaces; without iron, the national industry would remain dependent on the import of machinery and equipment" (CNI, 2008, p. 101). This was supposed to change in the future, but for the analyzed period Brazil was import-dependent on several products, the predominant currency, for international business, was the British pound (£).

The arrival of machines made possible the emergence of the textile industry, whose cotton and silk weaving were installed mainly in São Paulo, Rio de Janeiro, and Minas Gerais states. According to Suzigan (1986), "against this policy, during colony period, in 1810, the Portuguese government signed a commercial treaty with Great Britain, by which it granted preferential customs duty of 15% on British manufactures imported by Brazil. This right was gradually extended to other countries". The coffee export revenue favored investment in machinery and industrial equipment ensured the national industry's development. Coffee, although it was one of the main export products, favoring the entry of foreign exchange, suffered several shocks over the years, including the devaluation of the product on the world market.

The beginning of industrialization was also possible by the entrepreneurship of some citizens such as "Mr. Irineu Evangelista de Souza (1813-1889), known as Baron of *Mauá*, whose biography is marked by pioneering, and decisive initiatives for the development of Brazilian industry" (CNI, 2008, p. 49). The 24 greatest "pioneers and entrepreneurs in the transition from 19th to the 20th century are available in the research of Mr. Marcovitch" (Marcovitch, 2003, p. 328). Brazil one of the largest countries in extension, at the period, demanded tremendous effort in infrastructure, in all sectors from railroad up to sanitation.

In terms of country's development, by the time, the first industrial activities were more present in the South and Southeast, "with emphasis on Rio de Janeiro, with 30% of production; São Paulo, 16%; Rio Grande do Sul, 7% and Minas Gerais, 4%" (Renault, 1987, p. 87). The industrial activity

required an abundant also specialized workforce. However, at the time, the greater demand was still coming from the crop, mostly coffee, which attracted a massive number of immigrants. “Despite this, employment in the industry was growing. In 1907 there were 151 841 people employed in industry; in 1912, this number decreased to 144 520, and after eight years (1920), the number of employed grew up to 275 512” (IBGE, 2019). The number of workers increased gradually, at the same speed as the demand for business.

There would be diversification of activities and, in the period “between 1865 and 1913, the English began to invest in services, finance, coffee and rubber, mining, oil, iron, coal, industries, commerce, waste, and others” (Suzigan, 1986, pp. 180-239). The British contributed significantly to the development of Brazil’s infrastructure in the late Empire and early Republic. “Great Britain also provided most of the skilled labor force required by industry; mainly skilled textile workers, as well as those employed in the construction and operation of railways, and other relatively sophisticated activities in the shipping industry” (Graham, 1968, pp. 137-139).

The arrival of immigrants favored the increase of FDI, in the country. “Between 1855 and 1905, Brazil received 2.1 million immigrants, mainly from Italy, about 1 million (49.2%) of the total, followed by Portugal, 429 thousand, Spain 219 thousand, and other nations, approximately 376 thousand” (IBGE, 2007). In a short period of time, around 2.8 million salaried immigrants, were responsible for replacing slave labor in coffee farms; other immigrants brought in some capital, investing in various industrial sectors. Some of them were skilled technicians and engineers to assist the railway implementation and teach new employees, aggregating knowledge for Brazil.

For investments from the second half of the 1880s and 1890s, large beer factories began to install in Brazil, some of them remain operating in the 21st century. “There are installation reports of several breweries in the city of *Rio de Janeiro*, in the states of São Paulo, and the Rio Grande do Sul. The Brahma brewery, in Rio de Janeiro and *Bavaria* also the Companhia Antarctica Paulista in São Paulo, would become the largest” (Suzigan, 1986, pp. 218-291). Industrialization became diverse, food and beverage started to be processed in Brazil. “The influence of immigrant entrepreneurs, especially Germans, was of decisive importance for the development of this segment” (Suzigan, 1986, p. 218).

Over the years, immigration increased by 90%, influencing various sectors such as factories, also favoring portable product importation. One of the most useful imported products was the sewing machine Singer trademark, “authorized by Decree number 9,996 of 1888 to be installed through sales places in cities such as *Niterói*, *Campos*, *São Paulo*, *Salvador*, *Recife*, and *Pelotas*, maintaining an administrative office in *Rio de Janeiro*” (CNI, 2008, p. 56). The sewing machine in each family’s house boosted the homemade clothing and accessories manufacturers.

Immigrants take their culture to the country where they settle, with this, services and products accompany these changes, and reading news from the country and the world in their own language was truly common among communities. Between 1827 and 1906, some newspapers were circulating in the major cities in Brazil. “In Rio de Janeiro there were 12 newspapers, one named *Il Bersagliere*, an independent Italian newspaper from the Italian colony of Rio de Janeiro” (Hu, 1907, pp. 402-414). Italians were the largest immigrant colony for the period. In São Paulo, “the capital had 13 newspapers, among them, from foreign colonies such as *Turbina Italiana*; *Corriere D’Itália*; *Avante et Secolo* (in Italian) and *Deutsch Leitung* (in German), from German colony” (Hu, 1907, pp. 561-562).

São Paulo and Rio de Janeiro states developed faster than the others, due to industries, commerce, services, immigrants, ports, and the labor force. The most expressive number of Germans settled in the south of Brazil, contributing later to a great ancestry in the region, and the *Rio Grande do Sul* state received most Germans and Italians. “During the 19th century, the existence of a German colonial nucleus in southern Brazil made it possible to form a flow of German immigrants who sought opportunities in this region that Europe did not offer” (Rückert, 2013, p. 207). In the sequence, FDI in Brazil is analyzed, its origin, and sectors which would later house a growing population, contributing to the country’s development.

FOREIGN DIRECT INVESTMENT (1860-1913) AND COUNTRIES OF ORIGIN

For long period, Europe was the main investor in Brazil, followed by North America, and posteriorly several other countries have begun to invest too. As highlighted by Ana C. Castro (1976), FDI and the presence of multinationals in Brazil in the period between 1860 and 1913 seeks to understand from a *marriage* between the interests of the central countries with the development of the Brazilian economy. According to the author, there was an excess of capital that could be invested.

Also, explained by Suzigan (1986, p.96), “the Brazilian government, offered incentives to foreign capital for infrastructure development, as well as the various sectors of the national economy that needed to be constituted and developed”. It was about generating the basic conditions both to guarantee coffee production, as well as to establish the first industries in the national territory. “An example of these incentives was the bill passed in 1909, by Law 2,210 of December 26, 1909” (Câmara dos Deputados, 1909). Granting favors to individuals or firms, both domestic and foreign, to build steel mills in Brazil. Such favors included:

Reduced freight on government railways, exemptions from certain taxes, right to build mine extensions for the rail network, reduction in ore loading and unloading costs at federally administered ports, right to install ore handling equipment and non-federal ports and preference in public works for iron, and steel produced in the country at the same price as imported iron and steel, plus customs duties and other expenses” (Soares & Silva, 1972; Suzigan, 1986).

By government incentives, countless projects were submitted. In accordance with Suzigan (1986), the first incentive was proposed by the English group called Brazilian Hematite Syndicate, which acquired large deposits of iron ore in *Itabira* city, *Minas Gerais*, and planned to export the ore through the *Vitória-Minas* Railroad. After the sign, the contract, the foreign group, organized the *Itabira* Iron Ore Company. This firm bought control of the *Vitória Minas* Railroad. *Itabira’s*, however, due to financing difficulties, in addition to the problems caused by the First World War, the company was sold to Percival Farquhar. The case of *Itabira* Iron Ore Co., in its technical, financial, economic, and political aspects, was analyzed by several authors (Baer, 1988; Wirth, 1970; Peláez, 1972; Soares & Silva, 1972).

The increase in FDI from 1885 onwards, was a significant leap after the turn of the millennium. Table 1 shows the total investment in Brazil, where until 1895 mainly all foreign investment was British.

TABLE 1. BRITISH INVESTMENTS IN BRAZIL (£ MILLIONS 1840-1913)

Year ^a	<i>Non-Public Investment</i>						
	Total	<i>Public investment</i>	Total (£) million	Direct investment	<i>Private securities</i>		
					Total (£) million	Brazilian firms	Canadian firms
1840	6.9	5.6	1.3	1.3	-	-	-
1865	20.2	13	7.2	7.3	-	-	-
1875	31	20.4	10.6	10.6	-	-	-
1885	47.6	23.2	24.4	22.4	2	2	-
1895	78.1	37.5	40.6	24	16.6	16.6	-
1905	124.3	83.2	41.1	29.6	11.5	4.6	5
1913	264.3	129.1	135.2	56.7	78.5	6.2	38.6
Total ^a	572.4	312	260.4	151.9	108.6	29.4	43.6

^a Data refer to outstanding nominal debt, for non-public investments.

Source: Own elaboration based on Abreu (2000); Bouças (1955); Stone (1977).

As shown in the table 1, nonpublic investment in the majority was British, in the alternate period was superior to public ones, also increasing at every ten years. In private securities, Canadian firms started investing at the beginning of the 20th century, with significant investment in 1913. From the early twentieth century until the First World War, with the advent of the so-called second Industrial Revolution, other countries began to dispute FDI in Brazil with England, both the United States and Germany. England was the dominant investor in Brazil, also in Latin American. In the second half of the nineteenth century, investment was mainly in four countries: Brazil, Peru, Mexico, and Argentina (see table 2).

In Latin America, after Brazil, the most investments went to Peru, with 36.1% of the total, followed by Argentina, 20.3%; and among those with the lowest investment, was Nicaragua with 0.2%, in the sequence Guatemala 0.5%, both in Central America. England's total investment in Latin America, would never significantly exceed one-fifth of its total foreign investment.

According to Castro (1976), FDI in the second half of the nineteenth century there was the absolute predominance of English investments, and their applications focused mainly on exporting activities. Between 1860 and 1902, the English invested in railroads, shipping companies, insurance, banks, and importing houses. At the turn of the millennium, between 1897 and 1902, the presence of other countries investing in Brazil was intensified.

Tables 3 shows the case of the entry of Argentina and Portugal as a novelty, although their investments were not significant comparing with other countries.

England was the largest investor in the Brazilian economy during the 42 years reported, a volume of 77% of the investment, followed by France with 5.9% and Germany, 4.3%. Although Portugal and Argentina became investors, their participation was less than 1% of the total invested in the analyzed period. The British presence was decisive, mainly for the railway sector. "Regarding foreign investment between 1860 and 1902, it was small and little diversified in terms of sector, if compared with the results achieved in later periods" (Castro, 1976, pp. 23-24).

TABLE 2. BRITISH INVESTMENTS IN LATIN AMERICA BY THE END OF 1880 (£ MILLION)

<i>Country</i>	<i>Nominal investment^a</i> <i>(£) million</i>	<i>Country</i>	<i>Nominal investment</i> <i>(£) million</i>
Argentina	20.3	Honduras	3.2
Bolivia	1.6	Mexico	32.7
Brazil	38.8	Nicaragua	0.2
Chile	8.4	Paraguay	1.5
Colombia	3	Peru	36.1
Costa Rica	3.3	Dominican Republic	0.7
Cuba	1.2	Uruguay	7.6
Ecuador	1.9	Venezuela	7.5
Guatemala	0.5	General	10.2
<i>Total</i>		179.4	

^a It includes government loans (government securities) and the capital of foreign companies established in different countries.

Source: Own elaboration based on Castro (1976, p. 15).

SECTORS WHERE FOREIGN DIRECT INVESTMENT WAS HEADED

According to Lewis (1983, p.258) “*Mauá* held virtually one-half of EF *Mauá* stock. In addition, he possessed the large stake in the London registered *Recife São Francisco Pernambuco Railway Company Limited*”. With the interest of other countries in Brazil, sectors were specialized; investment from countries such as Belgium “was directed to basic services (especially railroad construction in the far south)” (Castro, 1976, p. 64). Some investments in railroad were Brazilian, even so, could not be compared with foreign investment. Funding was distributed also in the Brazilian countryside. Germany “divided capital between shipping companies, insurance companies, and a commercial bank” (Castro, 1976, p. 64).

French divided the investment between insurance and industrial company that produces agricultural machinery. Also, North America found out Brazil as an alternative of financing and chose the segment. “The American headed for the mining sector, beyond the entry of a shipping company” (Castro, 1976, p. 64). Diversification of activities contributes to the start of progress, along with infrastructure. Shipping was a sector developed pushed by international commerce, precisely for coffee, export, and later, other products were sent abroad. “British ships dominated trade links with the world economy” (Greenhill, 1977, pp. 118-155). Once more, Great Britain was a pioneer at that period, even in different sectors.

In accordance with Joslin (1963, p.162) “related to sectors where FDI was headed, British-owned commercial banks operating in Brazil, played an important role in financing trade, agriculture, and industry, although the British banks’ domestic businesses were eroded by increasing competition from homeowners, national houses at the end of the century. The financial sector was important, both for international loans made by the country and for national business activities”.

TABLE 3. COUNTRY OF ORIGIN OF FOREIGN CAPITALS 1860-1902 (£)

<i>Country of origin</i>	<i>Number of companies</i>	<i>Starting capital (£)</i>	<i>Capital changes</i>	<i>Bonds, debentures, bonds</i>	<i>Total (£)</i>	<i>Percentage over the total</i>
England	127	67 786 674	3 381 819	10 197 308	81 365 801	77.6
France	20	5 240 378	891 225	-	6 131 603	5.9
Germany	15	4 435 937	-	-	4 435 937	4.3
Belgium	23	3 998 498	15 868	98 850	4 113 216	4
Canada	1	1 228 082	-	1 228 082	2 456 164	2.3
USA	8	2 400 598	-	-	2 400 598	2.2
Austria-Hungary	2	1 631 034	-	-	1 631 034	1.5
Italy	5	1 833 041	-	-	1 833 041	1.7
Portugal	6	436 613	-	-	436 613	0.4
Argentina	2	120 000	-	-	120 000	0.1
Switzerland	2	1 810	-	-	1 810	0.00002
<i>Total</i>	212	89 112 665	4 288 912	11 524 240	104 925 817	100

Source: Own elaboration based on Castro (1976, p. 88).

Without cash flow, the Brazilian government took a loan in London to finance public works. “Government loans, a genuine example of portfolio investment, accounted for about 50% of British capital in this period. External debt would rise considerably over the second half of the last century” (Castro, 1976, p. 19). Brazil and Great Britain were commercially interconnected, the dependence on international credit was significantly high. The Brazilian export revenue was not enough to develop the country considering the territorial extension, FDI was necessary. Between 1860 and 1913, the basic services and the railways, stand out as the sectors that received the most investments, with the addition of diversified sectors (see table 4).

Banks services, railroad, and insurance together, represent 65% of investments, particularly an expressive amount for the period, while transformation industry, was less than 3%, representing a low investment at that period. By grouping the investment sectors in Brazil, between 1860 and 1902, it is possible to notice the investment diversification and strategic areas. As a conclusion to this item, we can state that “British investment was the most significant and, on the other hand, the most successful in Brazil before the Republican period and was quite diverse: railways, mining, utilities and banks” (Rippy, 1966, p. 13).

While logistics had most investment, public services in Brazil were organized only in the 19th century, by the institution of a specific secretariat: “Created by decree no. 1,067 of July 28, 1860, the Secretariat for Agriculture, Commerce, and Public Works Affairs, had its competencies and administrative structure initially regulated by decrees no. 2,747 and 2,748, both of February 16, 1861” (Gables, 2012, p. 10). During the period there was a lack of basic services in the country.

Public lighting, telegraphs, water services, sanitation, among others, oversaw this secretariat, although FDI between 1860 and 1902 in Brazil, was directed to sectors linked to the economy, there were initial investments in services. “The Brazilian electricity sector was historically constituted in a very irregular manner, responding to national economic and demographic inequalities” (Saes, 2020, p. 242). By all difficulties found in developing the energy sector, “foreign concessionaires marked the initial development of the electrical industry in Brazil. The main groups were the holding company Brazilian Traction, Light and Power C. Ltda., which controlled production and distribution in the cities of Rio de Janeiro and São Paulo, and several small neighboring locations” (Lorenzo, 2001-2002, p. 149). Rio de Janeiro was the Brazilian capital, between the 17th and 19th centuries, and the public lighting at that period was by oil lamp in the city.

When more investment in lighting began to be indispensable, Americans became the main investors. “The American Share Foreign Power Company (Amforp), a subsidiary of the American Bond and Share, which controlled the generation and distribution of electricity in cities in *São Paulo* state, in *Porto Alegre*, *Pelotas*, *Salvador*, *Recife*, *Natal*, *Vitória* also in cities of *Rio de Janeiro* state” (Lorenzo, 2001-2002, p. 149). Foreign groups invested in different country’s regions, due to the lack of large Brazilian investors in the period. In addition to North American investors, the British also invested in Northeastern Brazil in the public lighting sector.

While Brazil gradually gets modernized, yet it was still economically disorganized, and communication was demanded. Telegraph technology was dominated by Europeans, and Americans would later contribute to the Brazilian economy. “The telegraph was introduced in Brazil in the context of political and economic changes that took place in the 1850s. The implantation was motivated by international political interests, in the fight against the slave trade. It was the main pending issue of Brazilian diplomacy with England” (Silva, 2011, p. 51). During the period 1850s, D. Pedro II was the emperor, responsible for demanding the telegraph lines installation. After the slave trade extinction, the country aroused interest again in the telegraph due to regional disputes.

TABLE 4. FOREIGN INVESTMENT BY DESTINATION SECTOR, 1860-1902 (IN £)

Sector	Number of companies	Started capital	Capital changes	Bonds, debentures, bonds	Total (£)	Percentage over the total
Basic services	84	49 016 305	2 236 292	10 660 210	61 912 807	59
Railroads	32	27 161 066	2 153 725	6 727 028	36 041 819	34
Gas company	8	1 869 822	63 130	31 300	1 964 252	2
Electricity	6	3 269 305	19 437	1 228 082	4 516 824	4
Telegraphs and phones	5	2 300 000	-	1 060 000	3 360 000	3
Ports	4	1 860 000	-	230 800	2 090 800	2
Navigation companies	18	9 821 089	-	450 000	10 271 089	10
Public Works	4	1 904 879	-	865 000	2 769 879	3
Private services	7	830 144	-	68 000	898 144	1
Banks	10	6 410 157	1 850 000	-	8 260 157	7.8
Credit and investment company	3	2 120 000	-	-	2 120 000	2
Mining	28	3 184 845	308 933	138 270	3 632 048	3.4
Insurance	47	18 349 844	-	-	18 349 844	17.5
Import and export companies	16	5 548 512	-	360 000	5 908 513	6
Diversified	6	3 858 939	-	-	3 858 939	4
Branches	1	3 000	-	-	3 000	0
Coffee	3	1 060 000	-	360 000	1 420 00	1.3
Rubber	6	626 574	-	-	626 574	0.6
Agriculture Products	3	166 557	-	-	166 557	0.15
Transformation Industry	20	4 060 731	106 313	365 760	4 310 178	4
Sugar	13	2 946 270	106 313	365 760	4 310 178	2.7
Capital goods	2	802 200	-	-	802 200	0.78
Food	3	286 186	-	308 760	594 946	0.5
Miscellaneous	1	26 075	-	-	26 075	0.02
Diversified	1	255 713	-	-	255 713	0.25
Total	212	89 112 665	4 288 912	11 524 240	104 925 817	100

Source: Own elaboration based on Castro (1976, p. 87).

According to Silva (2011, p. 52), “from 1865, with the declaration of war against Paraguay, the government decided to invest in an unprecedented experience: to extend a telegraph line between the Court and the front. Although telegraph communication was a technology well dominated and developed in the USA and Europe, there was no precedent in Brazil that could guarantee the success of such a long line”. The national lines connecting cities, had several problems because the country did not have the technology yet.

Some foreign-owned companies were created in Brazil to operate the telegraphs. “The Brazilian Submarine Telegraph Co. in 1873, which in 1889 merged named Western and Brazilian Telegraph Co. giving rise to the Western Telegraph Company. Until 1907 this company would monopolize the submarine cable communications service in Brazil with the rest of the world” (Castro, 1976, p. 28). With a presence in Brazil for decades, Siemens a German company was responsible for supplying material and technology for submarine cables.

The telephone was also granted to a foreign company through an official decree, allowing the installation and exploitation of services according to specific clauses where the “monopoly of telephone services, guaranteed by the Rio de Janeiro municipality, had been granted to the Brazilianische Elektrizitäts-Gesellschaft, a German company. The Rio de Janeiro Telephone Company held all the capital in shares of the German company and R. J. T. L. P., bought, in turn, appropriate in this way the concession for telephone services” (Castro, 1976, p. 123).

Due to the lack of skilled labor, technology, and economic problems in Brazil for the period, the partnership with foreign companies was essential. While investment arrived, the population increased, to develop several sectors were mandatory to the country’s operation. Gas was the extremely young segment in Europe also in Brazil, receiving foreign investments, through some companies installed in Brazil “Gas da Bahia (1861); The Rio de Janeiro Gaz Co. (1866); The Nicteroy Gaz Co. Ltd (1868); The *Para* Gaz Co. Ltd (1868) and the *Sao Paulo* Gaz Co. Ltd. (1873)” (Castro, 1976, pp. 27-28). In terms of basic sanitation in the 18th and 19th centuries was a challenge worldwide, and the best models emerged in Europe. The conditions for the disposal of waste also in Brazil were precarious and manual in inappropriate places. “At the end of the 19th century, and the beginning of the 20th century, Brazil was known abroad for being a place where epidemics of yellow fever, smallpox, and bubonic plague proliferated” (Pauli, 2011, p. 16).

In Brazil, for a long period, slaves were responsible for all types of services, including those related to the transport of water and waste, as there was no sanitation or running water in the country. “Between the 1500s to 1850s was the early development and the implementation of the first sanitary actions; from 1850s to 1910s, raising awareness about the interdependence of sanitary actions in a context characterized by an ambiguous relationship between public and private water and sanitation services” (Stepping, 2016, p. 6).

There was still no basic sanitation or water code in Brazil, everything was in development. “Between 1857 and 1877, the government of São Paulo, after signing a contract with the company Achilles Martin D’Étudents, built the first *Cantareira* piped water supply system” (Pauli, 2011, p. 14). Some foreign companies diversify their business in Brazil and begun to invest in the different segment as water supply and sanitation. Other regions in Brazil started to have water and waste systems.

In the south of Brazil, in the *Rio Grande do Sul* state, “in 1861- Porto Alegre (RS) had an installed system” (Pauli, 2011, p. 14). In another city, for example “in the province of São Pedro of the Rio Grande do Sul, four water supply companies emerged during the Brazil empire period: the company Hydraulica Porto-Alegrense (1861); the Companhia Hydraulica Pelotense (1871);

Companhia Hydraulica Rio-Grandense (1871) and Companhia Hydraulic Guahybense (1881)” (Rückert, 2013, p. 24). The state of Rio Grande do Sul implemented water supply in several cities ahead of other states in the country.

The *Rio de Janeiro* city, in southeast “in 1876 used the Dortmund Decanter pioneer in the worldwide opening of a Water Treatment Plant (ETA), with six Rapid Air / Water Pressure Filter” (Pauli, 2011, p. 14). The British also invested in sanitation in Brazil, in practically all sectors, there were Englishmen negotiating. “The concession of the services was given to *João Frederico* Russell who organized in London a company named The *Rio de Janeiro* City Improvements, with an £ 835 thousand pounds capital. City’s contract endured for 90 years, from 1857 to 1947” (Brazilian Association of Sanitation and Environmental Engineering, 2021).

The drinking water and basic sanitation supply in Brazil, was a common challenge to all the major cities in the country. The fountains were the principal sources of water. “The success of these initiatives, however, has always been associated with government incentives given to the capital of large private investors, especially international” (Gables, 2012, p. 26). At the period, British investment was worldwide, for the opportunity and money availability comparing with other nations. “During an initial phase, which extended roughly from the mid-nineteenth century to the beginning of the First World War, foreign capital’s penetration in Brazil occurred mainly under the aegis of British commercial and financial interest, and fundamentally because of the country’s coffee export economy’s rapid development” (Szmrecsányi, 2002, p. 23).

With the growth of global coffee consumption, Brazil became the largest coffee producer, exporting worldwide, increasing coffee’s revenue sales. Minerals were one sector also to have prospected in Brazil; ore was one of the most abundant and underexploited, attracting investors. The mining sector relied on British and French investments in the 19th and early 20th centuries. The United States investment grew, interest in Latin America increased, and Brazil was the principal investment destination. “In 1929, Americans invested in Latin America, 23.6% for the agricultural sector, 21.1% for mining, 17.8% for oil exploration, 25.6% for the rail sector, and only 6.7% for manufacturing activities” (Curado & Cruz, 2008). Oil was a primary segment of interest to the United States investors, a new segment to be explored and critical to future activities in Brazil.

MULTINATIONALS THAT WORKED IN BRAZIL BETWEEN 1860 AND 1913

Understanding the presence of multinationals in the analyzed period (1860-1913), as well as the investment, is to follow, the presence of companies, especially in the major sectors of FDI as seen above. The main ones started their activities by building railroads, with transportation solutions instead of the one previously used, such as animal-powered carts. “The first two companies to offer the highway construction service in Brazil were the Botanical Garden Railroad (1868) and the Brazilian Street Railway Co. Ltd (1869)” (Castro 1976, pp. 28-40). In the next centuries, the highway would become, the largest transportation route, connecting states.

Other railways built in the period were divided by region since the southeast was the industrial richest region. “In South of Brazil, *The Teresa Cristina* Railroad (1876); *Cie Générale des Chemins de Fer Brésiliens* (1881); *Rio Grande do Sul Railway Co. Ltd* (1883); *Southern Brazilian Rio Grande do Sul Railway Co. Ltd.* (1883)” (Castro 1976, pp. 28-40). In several other regions of Brazil such as Northeast and Southeast railroad was built, with a diversified train line connection. In Northeast, “a *Brazilian Imperial Railway Ltd* (1876); *Cia da Estrada de Ferro do Norte*

the Nova Cruz (1876); Alagoas Railway Company (1881); Brazilian Exploration Co. Ltd (1881); The Sergipe Railway (1883). In Southeast, The Minas Rio Railway (1886); Brazil Great Southern Railway (1883); The Minas Central Railway of Brazil Ltd. (1883)" (Castro 1976, pp. 28-40). The country's connection allowed commodities transport with efficiency, also people's displacement since the population concentration was in in different capitals. Apart from infrastructure in transportation, new sectors became targets for investors.

Together, Europeans invested over £1 million in work improvement in certain areas, such as rubber, coffee, and sugar. Besides railways and public works, another relevant sector in investments from the second half of the 19th century was the financial sector. Some of these foreign investors stood out with the establishment of banks, including "London and Brazilian Bank (1871); The London and River Plate Bank (1862-1889); British Bank of South America (1863); Brazilian and Portuguese Bank (1863); London Brazilian and *Mauá* Bank Ltd (1865); Banque Brésilienne Française (1872); Banco Alemão Brasileiro (1873)" (see Castro, 1976, p. 26). With the arrival of the banks, the credits were also made available Brazilian companies could invest in other businesses in the country.

Investments in the financial sector by England, France, and Germany was over £6.5 million, between 1862 and 1889, with the English being responsible for the largest contribution, with about £4 million. "Until 1913 these banks raised their declared capital several times by distributing dividends to their shareholders" (Castro, 1976, p. 26). All these banks over the years either left the country or did business with other banks, ceasing to exist under their original names.

Several investments were done, in total five firms (three Belgium, one English, and one American) invested over £1 million, in diversified sectors, also commodities became interesting to invest. Sugar, one of the abundant commodities in Brazil in that period, exported to Europe, received French foreign investment. "In 1907 the various companies merged, forming *Société de Sucrerie Brésilienne*. Of the set, the most significant is the *Villa Rafard Société de la Sucrerie* (1899)" (Castro, 1976, p. 79). Foreign investors acting in several segments were strategic to develop specifics regions of the country, with Europeans being the main investors for a long period. Among the companies operating in Brazil, (1860 and 1913), some are still in operation while others have ceased, merged, or changed their names. In table 5 some international pioneer industries in Brazil.

Those fifteen multinationals are still operating in Brazil, whether with factories, distribution centers, or offices. As mentioned in the text, the United States began to invest in production in Brazil. The English presence was decisive in the infrastructure, however, the Americans and other nationalities remained through the industries. From the end of the First World War, the United States established itself as the country with the largest number of finished product multinationals in Brazil, and England became less present in the country.

As mentioned by Castro (1976) there was an exhaustive list of main multinationals that were established in Brazil in the period, between the beginning of the Republic, and 1913.

The multinationals settled specifically in the following segments: *a*) rail; *b*) lighting and urban transport; *c*) ports; *d*) civil construction; *e*) banking; *f*) mining; *g*) import and export trade; *h*) marketing of rubber; *i*) agricultural (products other than coffee and rubber); new sectors such as soaps, matches, sewing machines, elevators, automobiles, among others; *j*) manufacturing industry; *k*) food sector (in which more national firms coexisted with multinationals). All the sectors brought FDI to Brazil, contributing to the country's expansion in terms of population and economy.

TABLE 5. MAJOR FOREIGN MULTINATIONALS IN BRAZIL (1887-1930)

<i>Company/year</i>	<i>Origin</i>
Fiat Lux (1894)	Britain at the time
Bayer (1896)	Germany
Light (1904)	Canada
Bunge (1905)	Netherlands
Siemens of Brazil (1909)	Germany
Grupo Mondelez (1912)	United States
Swift & Co. (1917)	United States
Ford of Brazil (1919)	United States
General Electric (1919)	United States
Wayne Equipment (Wayne Fueling System) (1919)	United States
Rhodia (Solvay) (1919)	Belgium
Nestlé of Brazil (1920)	Switzerland
Unilever (1925)	United States
Gillette (1925)	United States
Chevrolet (1930)	United States

Sources: Own elaboration based on Bayer Co. (2019); Bunge Co. (2019); Light S. A. (2021); Siemens do Brasil (2019); Swift (2019); Mondelez International (2019); Ford (2019); General Motors Brasil (2019); General Electric Brasil (2019); Nestlé do Brasil (2019); Unilever do Brasil (2019); Wayne Fuelling (2019); Gillette (2019); Chevrolet (2019).

Brazil, as the largest country in South America, aroused interest from investors attracting mainly British investments, and later Germans, Americans, French, Canadians, among others. Without FDI Brazil certainly could not be able to develop its industry and the country by itself depending only on commodity revenues.

CONCLUSIONS

In conclusion, this research aimed to present among others, that since the late 19th and early 20th centuries, during the period, between the second half of the 19th century, until the First World War, when Brazil became Republic, FDI in Brazil was predominately British, with few American and German investment. With an indigenous population, followed in numbers by the blacks working as slaves, especially in agriculture, posteriorly with the transition from a slave in exchange for wage labor. A massive flow of immigrants, mainly Italians, Portuguese, Spanish, and Germans, contributed to the country's development building factories, shops, and several other enterprises.

The English were responsible for the first industrial revolution, also facilitate development through several innovations by that time, including investment abroad, diversifying business worldwide. In Brazil, this partnership started through the Portuguese administration until the Republic period. Investment started in the railroad, followed by shipping, banking, mining, commerce, sanitation, telecommunication, water, and so on. In the sequence, other countries invested in Brazil American and Canadian companies remain in Brazil in large sectors to this day, while the British stopped investing in the country on a large scale in the early years of the 19th century.

Although the whole world was going through the development, between 1860 and 1913, Brazil was still a country with little or no infrastructure; only a commodities' exporter (coffee, sugar, and rubber, in particular), with one of the largest slave populations (liberated in 1888), the most developed region was the state of São Paulo, followed by *Rio de Janeiro* in the southeast of Brazil, although in the whole country, states were developed, through rail installation and small factories.

In Brazil, the main industry to develop was weaving, followed by steelmaking. The country imported several machines to produce fabrics, clothing, shoes, and others. The English investment was not only through the British Government but also from the private sector. However, in terms of industries, the United States was the biggest investor, from Europe, the Germans, and the French also became large investors with continuous presence through several multinational installed in the country developing the automotive sector.

By that, since 1889, it was possible to assure that Brazil has been one of the main FDI destinations in the world. At that period, was mandatory to the country's development, favoring direct and indirect jobs, schools, hospitals, services, where only state-owned and small and medium-sized businesses could not supply.

The legislation on FDI in Brazil, underwent several updates, by the creation of decrees related to foreign capital, while the institutions and rules were still being defined and adjusted to the period; several institutions were developed at the same time. In the sequence, The First World War shook the world economy, also impacting Brazil. Yet between 1889 and 1930, the country succeeded in creating genuinely large Brazilian industries, which remain operating in Brazil nowadays.

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