Como citar este artículo: Carvalho Cristaldo, R. (2021). Economic Development Management: Brazil and Mexico between 1990 - 2012. *Fronteras* 17 (2): 60-75.

Economic Development Management: Brazil and Mexico between 1990 - 2012

Gestión del desarrollo económico: Brasil y México entre 1990-2012

Rômulo Carvalho Cristaldo[21]

https://orcid.org/0000-0001-6073-6413

Abstract

This paper addresses the problem of the effectiveness of neoliberal management for development. The method used was the *Principal Component Analysis* (PCA) of quantitative data. There was compared the development outcomes of two countries in which neoliberal policies penetrated differently: Brazil and Mexico. According to the results, the development performances of the two countries for the macroeconomic performance were statistically diverse. Between 1990 and 2002, when both the governments of Brazil and Mexico engaged in neoliberal reforms, Mexico's results were superior. In the years in which neoliberal policies were attenuated in Brazil, 2003-2012, Brazilian macroeconomic results outperformed Mexico's. This study contributes theoretically and in practical terms to the understanding of neoliberal agenda of development management, through verification of its effectiveness.

Keywords: Development Management, State, Neoliberalism, Comparative Analysis.

Resumen

Este artículo aborda el problema de la eficacia de la gestión neoliberal para el desarrollo. El método utilizado fue el Análisis de Componentes Principales (PCA) de datos cuantitativos. Se compararon los resultados de desarrollo de dos países en los que las políticas neoliberales penetraron de manera diferente: Brasil y México. Según los resultados, los desempeños de desarrollo de los dos países para el desempeño macroeconómico fueron estadísticamente diversos. Entre 1990 y 2002, cuando los gobiernos de Brasil y México se comprometieron con reformas neoliberales, los resultados de México fueron superiores. En los años en que las políticas neoliberales se atenuaron en Brasil, 2003-2012, los resultados macroeconómicos brasileños superaron a los de México. Este estudio contribuye teóricamente y en términos prácticos a la comprensión de la agenda neoliberal de gestión del desarrollo, a través de la verificación de su efectividad.

Palabras clave: Gestión del Desarrollo, Estado, Neoliberalismo, Análisis Comparativo.

21 Ph.D. in Management (NPGA/UFBA). Master's in management (NPGA/UFBA). Bachelor of Business Administration (UFBA). Full Professor at the Faculty of Management, Accountability and Economics (FACE) of the Federal University of Grande Dourados (UFGD). E-mail: romulocristaldo@gmail.com

Introduction

Among the recent experiences of state management for the promotion of economic development, Brazil and Mexico stand out for the distinctiveness of their choices and results. From the 1990s on, Brazil experienced an adherence to the Washington Consensus neoliberalism (Brandão 2013). However, a strategy characterized as *post-neoliberal* (Sader 2013) or *new-developmentalist* (Boito Jr. and Berringer 2013) stood out in the 2000s. Meanwhile, Mexico has dared an ever-deeper adherence to neoliberalism since the early 1980s (Calva 2019).

Both Brazil and Mexico are colonized Latin American countries under a typically Iberian logic of exploitation that bequeathed them a particular set of social relations from the agrarian base founded on monoculture for export. Such logic goes through the extensive use of slave labor, the suppression and even extermination of native peoples, and colonial ties whose premature construction and only partial split resulted in political and economic independence with particular characteristics, perhaps not even fully accomplished. In the 20th century, both Brazil and Mexico experienced the growth of large urban agglomerations, with rural exodus and favelization of cities. Through the action of authoritarian governments, both Brazil and Mexico experienced a policy of industrialization by import substitution. This strategy achieved, for some decades, such growth that the two countries were referred to as *miracles* (Russell 2010; Souza 2005).

In parallel, the experiences of the Brazilian and Mexican miracles were frustrated by the States' fiscal crisis, followed by oil shocks in the 1970s and 1980s (Ocampo 2014). However, there was a structural difference: while Brazil was dependent on imports (Souza 2005), Mexico was a net exporter (Russell 2010). However, this scenario did not prevent insolvency, internal crisis, and international isolation when the external debt crisis plastered state investment capacity in Mexico and Brazil (Ocampo 2014). The two countries experienced the 1980s in similar ways: in growing political upheaval, large portions of the population impoverished, institutions in crisis, and the economy in disarray. Moreover, both countries have leaned toward (or been forced to adopt) neoliberal solutions, Mexico as early as the early 1980s (Calva 2019) and Brazil since the early 1990s (Martuscelli 2015).

Their analogous condition in the 1990s, contrary to what one might expect, did not lead the two countries down similar paths. The 1990s for Mexico were years of growth (García, González and Herrera 2020), despite adverse contexts and changes as profound as the peso crisis in 1994 (Montiel 2015), the Free Trade Agreement of the Americas (NAFTA) (Vázquez et al 2017), and the Chiapas uprising (Alcântara and Bringel 2020). Brazil, on the other hand, surrendered to hyperinflation (Souza 2005), restrictive adjustments (Brandão 2013), financial crises (Saad Filho 2018), and, as will be seen here, negligible growth (Martuscelli 2015).

The present paper addresses this distinction from a quantitative study, focusing on the comparative object of state management for development in Brazil and Mexico between 1990 and 2012. We draw specific attention to how this social process seems to have occurred differently in the two countries, even though they apparently started from relatively similar bases. This discussion belongs to the managerial aspect (Cristaldo 2021) of the "new geography" of development (Horner and Hulme 2019, 353), highlighting the need for a revision of the so-called "new public management" (Bresser-Pereira 2017, 151) mainly guided by the neoliberal agenda (Hall and Gunter 2015).

Existing publications in the literature have discussed the economic development of one single country (Bandeira and Silva 2021; Calva 2019 and 2020; Salazar 2020) or have performed comparative analyses between countries and regions with uneven historical nor structural background (Andenas, Perelman and Scharling 2021; Silva, Peterle Neto and Teixeira 2021; Pineda 2021). However, they have not used a theoretical framework encompassing the neoliberal State's management agenda in a comparative analysis between two historically similar nations.

This article is divided into three sections. The first is the theoretical framework, to discuss the dimensions through which we represent development. The second section explains the data analysis methodology. In the third section, the most relevant results and findings are discussed. In the end, brief final considerations are outlined.

1. Theoretical Framework

1.1. State Management for Economic Development

Economic Development appears historically as the theoretical, symbolic, and political representation of a social process. Such a process presupposes quantitative and qualitative change, evidenced by a positive sign, in a complex social productive structure (Furtado 2009). *Development* terminology emerged in the mid-twentieth century as a list of theories about the alternatives to induce changes in the conditions of production and distribution of wealth in peripheral countries. This process would also be associated with social and political advances (Santos Filho 2005). We consider here that the nature of development is the dynamic of the capitalist mode of production.

Capitalism is characterized, among other particularities, by discontinuous processes insofar as the circuits of production, distribution, and financing that characterize it and contain within themselves seemingly irreconcilable structural contradictions (Harvey 2017). Such contradictions appear in the form of recurring crises, whether in the supply and demand areas or intra- and extra-class conflicts, among others. The main escape of the crisis has historically been expansion and mobility, what we understand as capital dynamics (Harvey 2011). Such dynamics translate into the triple process of (i) integrating increasingly distant geopolitical spaces to the logic of accumulation, (ii) causing more and more instances of sociability to be mediated by the market, and (iii) constantly pursuing innovations that allow for the more efficient use of inputs, such as labor and time, thus shortening the circuit of capital to accelerate the inflow of profits (Harvey 2013).

Therefore, the apparent dynamics of Capitalism is economic growth, which is explained as the expansion of real or fiduciary business volumes (Harvey 2017). This process, in turn, induces social transformations to provide institutional support for the expansion, from changes in the family division of labor to the legal framework of international transaction relations, from consumerism to entrepreneurship (Cristaldo 2018).

One could say that "economic and social development" would be the appearance of the dynamics of capital, as it expands while seeking to avoid, postpone, or recover from its crises and structural contradictions. Development is the phenomenal form taken by the social transformations induced, and at the same time demanded, by the continuous capitalist expansion. This perspective has a methodological unfolding: one can characterize this dynamic through its apparent form, the categories of product expansion (economic) and product distribution (social), as well as the relations between capital and labor (political).

2. Development as a Strategy

To observe development as a historical trajectory means considering the transformations and continuities of a set of economic, political, and social expansion categories' manifestation and relationship within a limited period. Relevant to consider such categories in the face of the State's management choices that aim to develop a nation. We follow Santos' (1976) understanding that the study of development is the critical observation of the evolution of societies in their historical development, aiming to understand the logic of this process, its potentials, and limits. In this sense, development superficially appears as a heuristic of change, which means an attempt to align the actors' decision-making flow, intending to produce long-term effects to compose a comprehensive action. Such a comprehensive action associates competition, growth, and integration of the social actors' interests, and it is also shaped as practices of ordering social action in a particular cultural context (Cristaldo 2021)—from a managing unit, the State.

However, the limits of possible changes from capitalist development strategies are found in the imperative of preserving its fundamental institutions (Cristaldo 2018). The structural aspects that are essential for the valorization and accumulation of capital do not change. These are the wage labor from which surplus value is extracted (Marx 1983); the State as the mediator of interests and the maintainer of the legality that guarantees the private appropriation of capital (Marx and Engels 2007); and the company as an apparatus of control over labor activity (Marglin 2001).

Therefore, development always seems to present itself as a proposal for change at the margin or as a discourse that ultimately aims to preserve Capitalism in its essence by transforming its immediate exteriorities. Developmental changes are not infrastructural ruptures but rearrangements—or reforms—at the superstructure level. However, on the other hand, they engender the expansion and deepening of capitalist forms of accumulation and valorization and, consequently, their contradictions. In other words, development is presented as economic and social, therefore universal and generalist, even though it seeks to ensure the reproduction of capital. Thus, its byproduct is the reproduction of the contradictions, fissures, and forms of oppression thickened in capitalist relations of value production (Cristaldo 2018).

3. The Neoliberal Strategy

Neoliberalism would therefore also be a development strategy. Primarily, it would be a global strategy from the rentier classes to establish parameters of control and management over the various capitalist institutions: The State, the company, and labor relations (Dumenil and Levy 2004). Neoliberalism would impose itself as rationality with universalistic pretensions, whose main tactic would be to (i) reorient the management patterns of organizations, (ii) while inculcating the individualistic and competitive mentality of entrepreneurship in people (Dardot and Laval 2014).

Considering this second aspect as its structural basis, one can see that the neoliberal project involves taking all the social actors' choices—whether professional or intimate—to be governed solely by rational calculation. All aspects of human relations would be guided by efficiency, quantitative maximization of results, *accountability*, competition, and performance. This perspective would penetrate even alternative forms, such as social management (Dardot and Laval 2016).

In this sense, the neoliberal market assumes the didactic-formative function of grooming subjects to fully realize their selfish potentials through competition against all (Dardot and Laval 2016). To this end, the market institution needs to be regulated by the State to mold—plan, organize, command, coordinate, and control—behaviors and ways of thinking of social actors according to the logic of competition. Legitimate state intervention will therefore only be that which ensures the competitive functioning of the market, as well as social structures that conform to the choices of populations to act accordingly (Harvey 2005).

In a macro sense, the neoliberal political agenda is materialized in a state management model based on (i) deregulation of capital markets, (ii) debureaucratization of the labor market, (iii) dismantling of social security apparatuses, (iv) gradual, when not immediate, elimination of customs barriers, (v) disarticulation of labor unions' ability to claim their rights, (vi) elimination of state subsidy and fostering structures, (vii) monetarist reorientation of macroeconomic management, among other principles (Harvey 2005).

According to this orientation, economic and social change depends on articulating the maintenance of the so-called macroeconomic tripod: floating exchange rate, inflation targets, and fiscal targets. Such an articulation also counts with the reduction or extinction of the State's social policies, further privatization liberalization, and the deregulation of markets (Harvey 2005). Neoliberalism established itself as an orthodox alternative associated with the notion of minimal State (Saad-Filho and Morais 2018), as it was articulated for the seizure of power by rentier capitals in the various countries where it penetrated, in a context of *the alleged* fiscal crisis of the State (Ocampo 2014).

Internationally, the neoliberal strategy was most evidently characterized by the rise of finance as the dominant institution. Until the 1970s, there were strict regulations against the financial system in central countries (and many of the peripheral ones). These regulations were created in the 1930s and 1940s and limited the ability of financial institutions to act (Harvey 2005). With the rise of the neoliberal strategy and the coming to power of its representatives, these regulations were overturned, which allowed a greater dynamism and flexibility in capital markets and the prospecting of investment opportunities, financializing capitalist economies (Dumenil and Levy 2004). Flexible management methods were consolidated in companies (Brandão 2013).

However, the neoliberal logic of state management showed dubious results in terms of development. On the one hand, income disparities between countries decreased after the 2000s, suggesting a "great convergence" (Mahbubani 2013, 19) between the developed North and the underdeveloped South. On the other hand, economic inequality within countries has either maintained or increased since the last quarter of the 20th century in developed and underdeveloped countries (Horner and Hulme 2019). In other words, the neoliberal State concentrated income aiming to offer a favorable environment for business to provide the dreamed development. It mainly served the interests of prominent businesspeople and rentier capitals (Dumenil and Levy 2004).

4. The International Context and the Trajectories of Brazil and Mexico Between 1990 and 2012

The 1990s were a period of advancement and penetration of new neoliberal policies in the countries of the capitalist periphery (Ibarra 2011), but also exposure to increasingly destructive international financial crises (Harvey 2011). The terms of the new neoliberal order were assimilated in Latin America through what became known as the Washington Consensus. The prescription of shock measures, notably inspired by neoliberal principles, imposed by the International Monetary Fund (IMF) in exchange for monetary aid to countries afflicted by the state fiscal crisis of the 1980s (Stallings 2014). However, in each country in the region, these principles have been implemented differently, given structural conditions, context, and relative positions within the capitalist world-economy (Ibarra 2011), as in the cases of Brazil and Mexico.

In Mexico, the penetration of the neoliberal agenda began as early as the first half of the 1980s (Calva 2019). Since then, the country has gradually yet steadily deepened the so-called structural reforms. It opened markets under the *North American Free Trade Agreement* (NAFTA). Mexico maintained an economic policy based on the macroeconomic tripod. The country engendered privatization, frayed social welfare policies, made the labor market more flexible, etc. (Vazquez 2017). The two political forces that have taken turns in power since the 1980s—the Institutional Revolutionary Party (PRI) and the National Action Party (PAN)—have committed themselves to neoliberal principles (Russell 2010).

On the other hand, Brazil only adhered to neoliberal policies from the 1990s on. Even then, the penetration of this agenda was not automatic. While between 1990 and 2002, an openly neoliberal agenda drove the country under Collor, Franco, and FHC, these governments could not fully accomplish their reformist proposals due to the fragile balance of power through which they came to power (Souza 2005). From 2003 until 2012, there was the rise of PT – a critical voice of neoliberal policies from the beginning. If the party did not reverse the reforms made until then, at least the advance of such reforms was attenuated (Sader 2013).

Our thesis is that the relative paralysis of neoliberal reforms in the PT governments induced the resumption of development in Brazil as of 2005. However, such paralysis included neoliberal macroeconomic management (Gonçalves 2013). In Brazil, from the 2000s on, a growth model based on income redistributive mechanisms was implemented through social and investment policies led by the State (Kerstenetzky 2016). This would be the main difference between the economic policies of Brazil and Mexico (Cristaldo 2018).

5. Capitalist Development: Economy, Labor Relations, and Social Advancement

The social process of development, insofar as it presents itself as the phenomenal expression taken on by the expansion of the capitalist mode of production, engenders transformations in the most diverse aspects of societies. In this sense, it is not merely the material expansion in a complex economic system (Furtado 2009), but the continuous reconfiguration of its social relations of production and distribution according to the capitalist rationality (Santos Filho 2005) that necessarily involves all the other instances of sociability (Santos 1976). The law, cultural expressions, the conditions of labor relations, the conditions of education, health, and political representation, among others, are articulated and transformed into a relationship of co-constitution. If we accept as a premise that development is the expansion of capitalist production (Cristaldo 2018), it transforms everything around it as the capital expands (Harvey 2013).

This expansion, therefore, takes the force of the difference in the accumulation of output and income in a complex economy. It results from the investment (Furtado 2009), which appears as variation in aggregate, or macroeconomic, indicators (Cristaldo 2018). The economic growth, in turn, would engender changes in other social dynamics, thus pulling the advancement of political, educational, health access, and security aspects (Furtado 2009), which can be observed through social indicators, such as the HDI (Cristaldo 2018). It is still relevant to consider that development was characterized here as the phenomenal form of expanding the capitalist mode of production. Therefore, the conditions in labor relations can be listed as evidence of development since the fundamental characteristic of Capitalism is a possible relative degeneration of the material conditions of the working class (Marx 1983).

Thus, a critical analysis of development is possible through the indicators that are typically used for this in the logic of *mainstream* economics. These indicators directly reveal the capitalist dynamics, but mainly because of their potential to expose how the advance of capital transforms the logic of the economy, society, and labor relations. In order to better characterize the economic development processes of Brazil and Mexico between 1990 and 2012, we used three dimensions: (1) macroeconomic indicators; (2) social indicators; (3) indicators regarding labor relations. Another crucial fact is the development context, or rather the logic of the development strategy being analyzed. The development trajectories of Brazil and Mexico between 1990 and 2012 were marked by their closeness to and distance from the neoliberal strategy, as we already discussed in the introduction. In the following section, we will discuss the methodology employed in the research.

6. Methodology

This research is configured as a comparative case study with a quantitative orientation. The study's main contribution is in assisting the evaluation and comparison of manifestations that have an intrinsic value to the field studied, as we believe to be the case of the development trajectories of Brazil and Mexico.

Data were collected with indicators of eleven variables to compare the development trajectories of Brazil and Mexico between 1990 and

2012, in three dimensions of analysis, so that they could be used as a *proxy* for the development phenomenon. The (a) *macroeconomic development* dimension was composed of: variation of the gross domestic product (GDP); variation of the exports of high-technology products (in % of GDP); variation of the total exports of goods and services (in % of GDP); variation of the GDP *per capita*; and the variation of the gross formation of fixed capital (in % of GDP). The (b) *social development* dimension was based on: variation in the percentage of citizens below the poverty line; variation in life expectancy at birth; variation in the Human Development Index (HDI); and variation in the country's position in the world HDI ranking. Finally, the (c) *development of labor relations* dimension was built from: variation of the GINI index (considering and correcting its negative reading specificity); variation of the open unemployment rate in urban areas; and variation of the Purchasing Power Parity of the minimum wage (PPP, in U$). Data were collected for the period between 1990 and 2012.

The data mass was treated using the *Principal Component Analysis* (PCA) tool. PCA allows the variability of a data set to be expressed in a more representative way, which takes the form of an abstract variable, a *score*. For each year, development data scores were created for the time unit, by country, and then arranged in historical series, whose base year was 1990. From these scores, the overall development performance of Brazil and Mexico was compared in two periods, 1990–2002, 2003–2012. The variables were also grouped by each of the three dimensions previously mentioned, creating specific scores for the dimensions concerning macroeconomic development, social development, and labor relations development in the same periods. To this end, we also employed the PCA method, which then provided three more abstract variables.

Since the sample refers to only 23 years, between 1990 and 2012, we opted out of employing non-parametric methods of analysis. Shapiro-Wilk, Kolmogorov-Smirnov, and Anderson-Darling normality tests were used. The tests reinforced the assumption that the sample scores are not normally distributed. Thus, in order to verify if there is different behavior between the development scores of the two countries, we employ the Mann-Whitney method for comparison between two independent samples. This procedure was used for both the global scores and the scores per category in the two periods.

The information used in these analyses was collected from databases made available on the Internet by three official institutions, the United Nations Database (UNdata), the Brazilian Institute of Geography and Statistics (IBGE), and the Mexican National Institute of Statistics and Geography (INEGI). For the composition of the scores representing the variability of the development data for both countries, both overall and by category, we used MatLab data analysis software. For the statistical analysis of the scores, we employed Microsoft Excel 2013, with the *Real Statistics Data Analysis* patch.

7. Results and Discussion

One of the main arguments of this paper is based on the assertion that Brazil's only partial adherence to neoliberal reforms between 1990 and 2012 provided the opportunity for the country to outperform Mexico in development. The latter has carried out deep neoliberal reforms since the early 1980s. We assume that the Brazilian State's management has gone through at least two different phases. The first was more open neoliberalism, between 1990 and 2002, and neoliberalism attenuated by social policies and public spending programs between 2003 and 2012. We believe that it is helpful to strengthen this argument by comparing the performances of Brazil and Mexico in these two distinct periods. Considering the period between 1990 and 2002, we obtained **Figure 1** presented below.

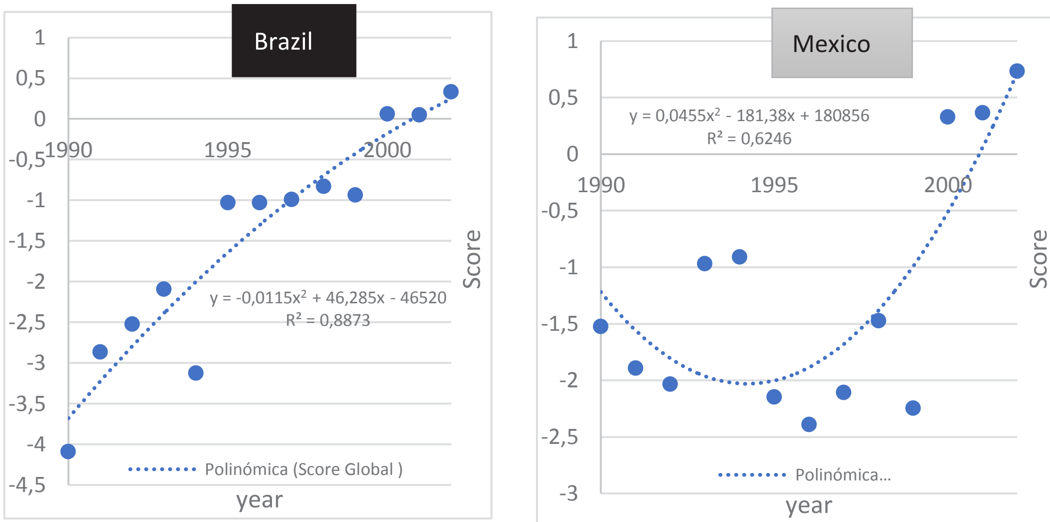

Figure 1: Multivariate performance between 1990 and 2002 of Brazil and Mexico.
Sources: the authors based on data provided by UNdata, INEGI, and IBGE.

Comparing the global development scores of Brazil and Mexico between 1990 and 2002 shows evidence of a distinction in those countries' performances. Firstly, the curves obtained are visually different. The curve referring to Brazil's data presents itself as a parabola with a polynomial equation with negative Coefficient A, denoting a more constant positive variation. However, it also shows a peak from which Brazilian performance variation starts to decrease. The curve referring to Mexico's data appears as an inverted parabola with positive Coefficient A, suggesting a period of sharp decrease, but with a resumption after the middle of the series. If data dispersion appears larger for the occurrences in the Mexico graph—resulting in a lower R^2 for the model—this seems to reflect an erratic performance compared to the Brazilian one. Indeed, in the 1990s, Mexico's reality was stormier than Brazilian's: more severe crisis, more remarkable change, and political turmoil (Russell 2010; Souza 2005).

Normality tests were performed to verify if these two data groups presented variability that would approximate a normal curve. Given the small data set, the tests suggested that it is not possible to consider these distributions as normal. Then, to verify if there was significant performance differentiation for these scores between 1990 and 2002, the non-parametric Mann-Whitney test was employed.

Table 1: Mann-Whitney Test Results for the Behavior of Global Development Scores of Brazil and Mexico, between 1990 and 2002

BR Score		Mex Score
count	13	13
median	-1,02843	-1,5233
rank sum	169	182
Us	91	78
	one tail	two tail
alpha	0,05	
Us	78	
mean	84,5	
std dev	19,5	ties
z-score	0,333333	
effect r	0,065372	
U-crit	52,42535	46,2807
p-value	0,369441	0,738883
sig (norm)	no	no

Sources: the authors based on data provided by UNdata, INEGI, and IBGE.

Note: Generated from the *Real Statistics Data Analysis Tool* patch for Microsoft Excel, 2013.

Considering the variables that make up the *global scores* created in this research to characterize the development performance of Brazil and Mexico, it was not possible to identify a statistically significant difference between the results of the two countries in the period between 1990 and 2002 (see **Table 1**). This information is consistent with the premise that countries are structurally similar and therefore comparable.

In addition, we also agglutinated the variables to characterize development employing scores for the period between 2003 and 2012, from which we obtained **Figure 2** below:

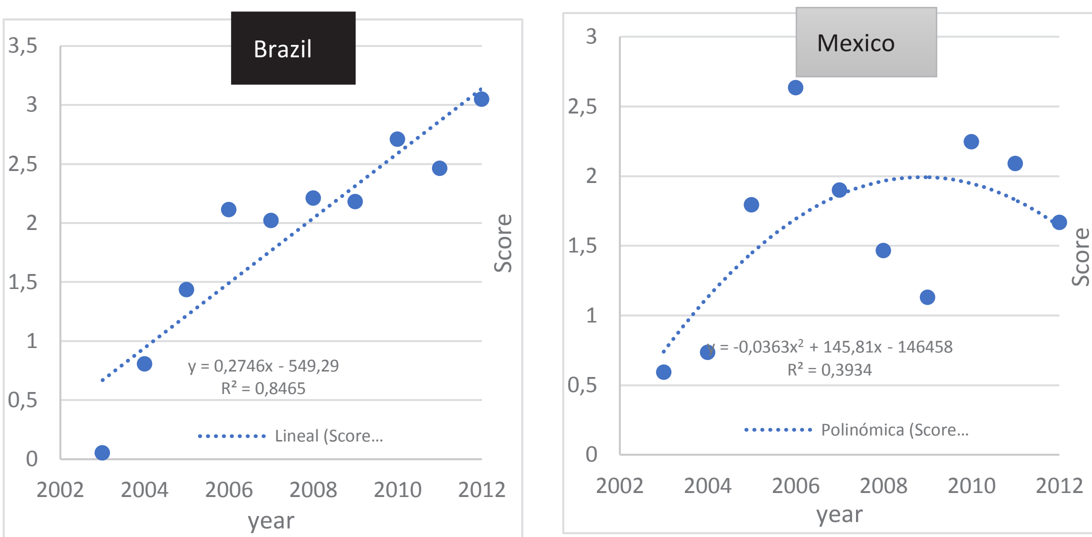

Figure 2: Multivariate performance of Brazil and Mexico between 2003 and 2012
Sources: the authors based on data provided by UNdata, INEGI, and IBGE.

From these graphs, it is possible to infer that Brazil's development data score showed greater regularity than Mexico's. So much so that linear regression can be performed, resulting in a first-degree equation whose R^2 was approximately 0.84. In the case of Mexico, one can see the continuity of comparatively erratic behavior in the data set. This result is characterized by the straight line resulting from the score. The line showed a decreasing trend as of 2008 (when the international financial crisis broke out), although the R^2 of 0.3934 of the function obtained suggests low representativeness of the model.

Similarly, normality tests for this data set between 2003 and 2012 did not suggest a distribution close to a normal curve, neither for Brazil nor Mexico. Consequently, the Mann-Whitney non-parametric test was employed to verify a significant difference in the score's behavior in the period (**Table 2**).

Table 2: Mann-Whitney Test Results for the Behavior of the Global Development Scores of Brazil and Mexico, between 2003 and 2012		
BR Score		Mex Score
count	10	10
median	2,147246	1,730796
rank sum	120	90
Us	35	65
	one tail	two tail
alpha	0,05	
Us	35	
mean	50	
std dev	13,22876	ties
z-score	1,133893	
effect r	0,253546	
U-crit	28,24063	24,07211
p-value	0,12842	0,256839
sig (norm)	no	no
Sources: the authors based on data provided by UNdata, INEGI, and IBGE.		
Notes: Generated from the *Real Statistics Data Analysis Tool* patch for Microsoft Excel, 2013.		

In light of the variables that made up the global scores created to characterize the development performance of Brazil and Mexico, it was not possible to identify a statistically significant difference between the two countries in the period between 2003 and 2012. Again, in our analysis, this result reinforces the possibility of comparison between countries.

Then, the different dimensions of development were analyzed separately to verify these results. Thus, through PCA, scores were created by dimensions of development analysis, for the period between 1990 and 2002, for the two countries, as in **Figure 3** below:

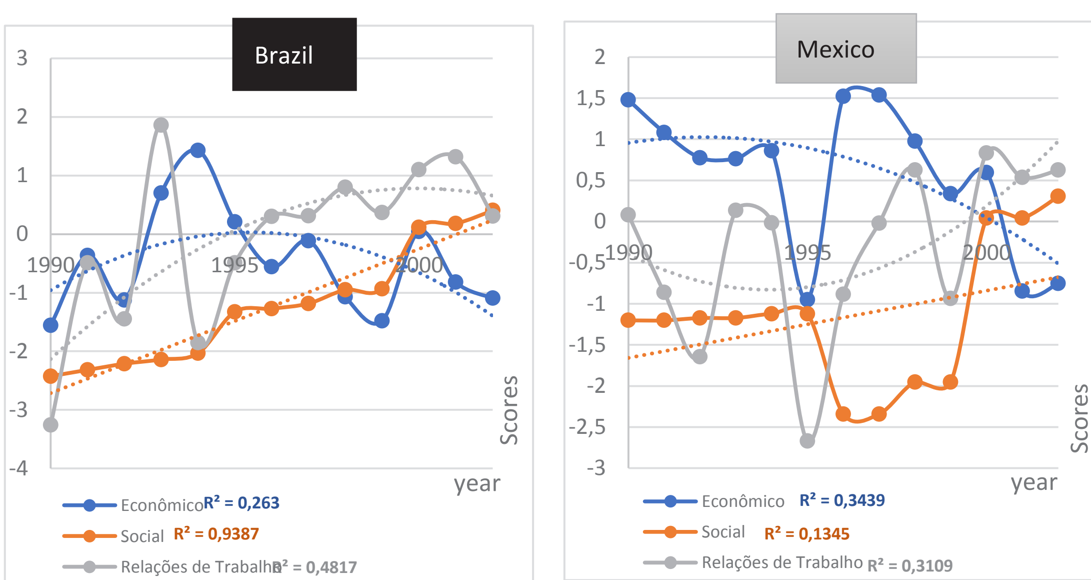

Figure 3: Multivariate performance by dimensions for Brazil and Mexico from 1990 to 2002.
Sources: the authors based on data provided by UNdata, INEGI, and IBGE.

By observing the two graphs, it is possible to notice a similar behavior between Brazil and Mexico regarding the score that agglutinates the economic variables. This similarity is due to both curves resulting from the regression shaped as parabolas, with quadratic polynomial functions whose *Coefficients A* are negative. However, the explanatory capacity of both is relatively weak, presenting R^2 with a value of 0.263 and 0.3439, respectively. Regarding the labor relations (policy) variables' scores, we have a visual difference since the *Coefficient A* of Brazil's data's curve is negative, while the curve representing Mexico's data has a positive *Coefficient A*. However, likewise, the R^2 indicator denotes little explanatory power, with values of 0.4817 and 0.3109, respectively. The curves representing the social data score that—both linear—reveal a more typical behavior for data from Brazil than from Mexico.

Development dimensions between 1990 and 2002 separated this data set. The normality tests for this data set, as before, did not suggest a distribution close to a normal curve for any of the dimensions. Therefore, we adopt the premise that it was safer to use the Mann-Whitney non-parametric test to verify a significant difference in the behavior of the scores by dimensions, between the countries, in the period. The results are represented in Table 3 below.

Table 3: Mann-Whitney Test Result for the behavior of Brazil and Mexico development scores, divided by categories, between 1990 and 2002

BR Economic		MEX Economic	BR Social	MEX Social	BR Labor	MEX Labor
count	13	13	13	13	13	13
median	-0,5567	0,775486	-1,27114	-1,17325	0,310631	-0,01756
rank sum	123	228	170	181	191	160
Us	137	32	90	79	69	100
	one tail	two tail	one tail	two tail	one tail	two tail
alpha	0,05		0,05		0,05	
Us	32		79		69	
mean	84,5		84,5		84,5	
std dev	19,5	ties	19,47999	ties	19,5	ties
z-score	2,692308		0,282341		0,794872	
effect r	0,528005		0,055372		0,155887	
U-crit	52,42535	46,2807	52,45827	46,31992	52,42535	46,2807
p-value	0,003548	0,007096	0,388841	0,777682	0,213344	0,426688
sig (norm)	yes	yes	no	no	no	no

Sources: the authors based on data provided by UNdata, INEGI, and IBGE.

Notes: Generated from the *Real Statistics Data Analysis Tool* patch for Microsoft Excel, 2013.

The Mann-Whitney test revealed a statistically significant difference in the countries' performances at a 95% confidence level considering the macroeconomic development dimension. The same does not happen with the social development and labor relations dimensions. The P-value > 0.05 in these two results (see **Table 3**) indicates rejection of the hypothesis that there is a difference in behavior between the two scores. Nevertheless, the macroeconomic development score analysis presented a P-value < 0.05. It suggests a higher probability that the development performances of Brazil and Mexico between 1990 and 2002 were dissimilar for our data set.

This difference becomes evident when the descriptive statistics are analyzed. The average score for Brazil's economic variables between 1990 and 2002 was negative, approximately -0.4453. This score based on our data set indicates that Brazil's more broadly neoliberal experience between 1990 and 2002 brought bad results in terms of development. The average of the same score for Mexico was positive, approximately 0.5675, suggesting a better performance by Mexico. The scores' standard deviations for Brazil and Mexico—approximately 0.883 and 0.884, respectively—suggest that both countries presented statistically equivalent oscillations in macroeconomic development.

Therefore, while the performances of Brazil and Mexico for the social data and labor relations scores did not differ significantly, there was a clear distinction in the macroeconomic data scores, with Mexico performing relatively better between 1990 and 2002. Although both countries embraced neoliberal reforms (Ibarra 2011), and even though Mexico faced worse economic imbalances (García, González and Herrera 2020), the Mexican economy still outperformed Brazilian's.

Next, we followed the same procedure for the period between 2003 and 2012, obtaining **Figure 4** below:

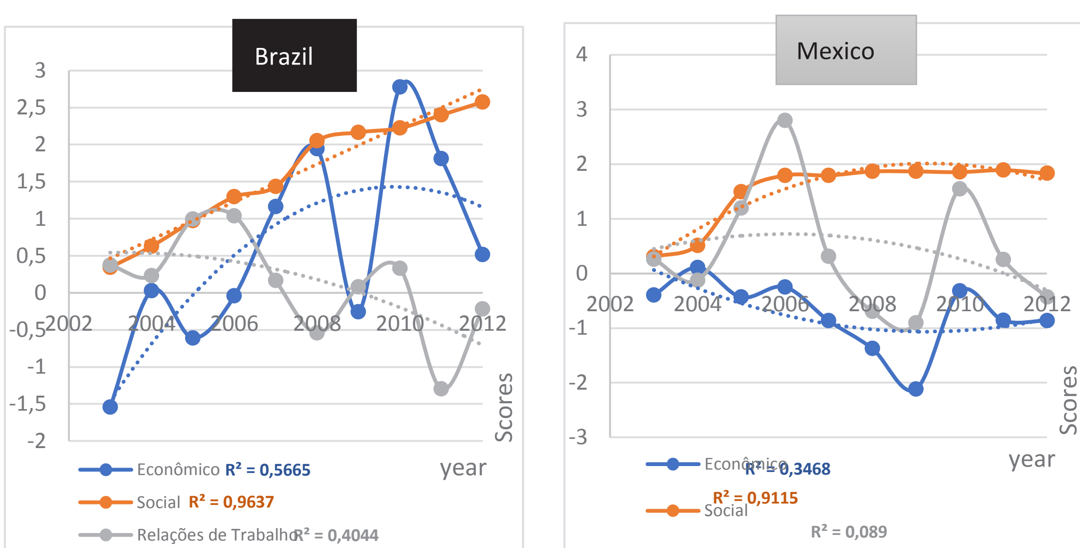

Figure 4: Multivariate performance by dimensions for Brazil and Mexico from 2003 to 2012
Sources: the authors based on data provided by UNdata, INEGI, and IBGE.

It is possible to notice a distinct behavior between Brazil and Mexico concerning the macroeconomic development score comparing the two graphs. Such distinction is due to the regression curves, shaped as parabolas, with quadratic polynomial functions. However, Mexico had a positive *Coefficient A*, while Brazil's was negative. Nonetheless, it can be pointed out that the explanatory power of both is relatively weak, with R^2 values of 0.5665 and 0.3468, respectively. The graphs appear to be similar about the labor relations variables score, both with negative *Coefficient A*. However, likewise, the R^2 indicator denotes little explanatory power, with values of 0.4044 for Brazil and 0.089 for Mexico. In turn, the curve representing the social data score—Brazil's linear, Mexico's polynomial quadratic with negative *Coefficient A*—reveals a more typical behavior for data from Brazil than from Mexico.

Following the previously described procedures, normality tests for this dataset were separated by development dimensions between 2002 and 2013 and did not suggest a normal distribution. Thus, the Mann-Whitney non-parametric test was used to verify a difference in the dimensions scores behavior between the countries in the studied period (see **Table 4**).

Table 4: Mann-Whitney Test Results for the behavior of Brazil and Mexico development scores, divided by categories between 2003 and 2012

BR Economic		MEX Economic	BR Social	MEX Social	BR Labor	MEX Labor
count	10	10	10	10	10	10
median	0,273028	-0,64836	1,74213	1,810757	0,198218	0,256591
rank sum	137	73	114	96	100	110
Us	18	82	41	59	55	45
	one tail	two tail	one tail	two tail	one tail	two tail
alpha	0,05		0,05		0,05	
Us	18		41		45	
mean	50		50		50	
std dev	13,22876	ties	13,21881	ties	13,22876	ties
z-score	2,418973		0,680848		0,377964	
effect r	0,540899		0,152242		0,084515	
U-crit	28,24063	24,07211	28,257	24,09162	28,24063	24,07211
p-value	0,007782	0,015564	0,247984	0,495968	0,352728	0,705457
sig (norm)	yes	yes	no	no	no	no

Sources: the authors based on data provided by UNdata, INEGI, and IBGE.

Notes: Generated from the *Real Statistics Data Analysis Tool* patch for Microsoft Excel, 2013.

Again, Mann-Whitney test results revealed a statistically significant difference between the economic dimension scores between 2003 and 2012 at 95% confidence. Like the previous period, there were no significant results regarding the social data and labor relations dimensions (see **Table 4**). This indicates that the difference between the individual country samples' medians is not statistically significant. There is a higher probability—with statistical significance—that the economic development performances for Brazil and Mexico in the period were dissimilar, considering our data set.

However, it is worth noting that this potential difference's meaning was different from that of the previously analyzed period. Brazil's economic variables average score between 2003 and 2012 was positive this time, approximately 0.579, while the average of the same score for Mexico was negative, approximately -0.7378. The standard deviations of these scores for Brazil and Mexico—respectively and approximately 1.33 and 0.641—suggest that in this period, both countries presented statistically different oscillations concerning economic performance.

Thus, while Brazil and Mexico's performances concerning social data and labor relations scores did not show a significant difference, there was a distinction in the economic data scores, and this time Brazil performed relatively better than Mexico between 1990 and 2002. Consequently, the evidence we gathered here indicates that the change in the State's management of economic development during the PT governments helped the Brazilian economy outperform Mexican's economy in the same period.

Concluding Remarks

The first section of this article discussed the notion of development, which was characterized from three dimensions: macroeconomic, social, and labor relations (as a *proxy* for political development). These three dimensions served as a suggestion, clues to the capitalist dynamics. The second section explained the methodology used in this study: a comparative approach based on quantitative data analysis through development variability scores according to these three dimensions.

According to the analysis performed in the third section, by development dimensions—based on the economic, social, and labor relations score—it was not possible to find a statistically significant difference for the last two dimensions (social and labor relations data) concerning the available behavior data for Brazil and Mexico, neither for the 1900-2002 period nor the 2003-2012 period. However, a statistically significant difference in Brazil and Mexico's performances concerning the economic dimension between 1990 and 2002 was denoted, with Mexico outperforming Brazil. We also found a statistically significant difference in Brazil and Mexico's performances between 2003 and 2012, with Brazil's performance being superior.

Thus, based on our data and methodological process, it is fair to assume that, when the Brazilian and Mexican governments were simultaneously deepening neoliberal policies, Mexico's development management was more successful—primarily explained by Mexico's membership in NAFTA (Moreno-Brid and Bosch 2010). However, with the rise of the PT governments from 2003 onwards and the consequent attenuation of neoliberal policies, whether through redistributive actions or the State's induction, this logic was inverted in Brazil. Brazilian improved economic results when compared to Mexico's, between 2003 and 2012, in our view, show that Mexico's neoliberal State management—even reinforced by NAFTA—was ineffective in achieving the economic development outcome. Looking from another angle, even the erratic, contradictory, and in many ways still aligned with some of the neoliberal fundamentals (Gonçalves 2014), development management of the State under PT governments was more economically effective than the deepening neoliberal reforms employed in Mexico.

It can be said that the attenuation of the neoliberal agenda in Brazil since 2003 allowed the country to perform more successfully in terms of economic development. In Mexico, by contrast, unrestricted adherence to neoliberalism for more than three decades, in addition to throwing large portions of its population into deep poverty in the countryside and the city (Cristaldo 2018), has not been able to deliver comparatively satisfactory economic performance. Our data draws attention to the need for new research about the efficiency and effectiveness of neoliberal development policies beyond the mere criticism of their social effects (Saad Filho and Morais 2018).

References

Adenas, M., Perelman, j., and Scharling, c. (2021). *The Fight Against Poverty and the Right to Development*. Cham, Suíça: Springer.

Alcântara, L., and Bringel, B. (2020). Dos Zapatistas aos Indignados: Mudanças na Geopolítica das Solidariedades Transnacionais. *Educação & Sociedade*, 41: e231325. https://doi.org/10.1590/es.231325

Bandeira, J. V., Mancio, V. and Silva, P. P. da (2021). Nacional, Democrático e Social: o Desenvolvimentismo Chileno Durante os Governos Radicais. *Brazilian Journal of Political Economy*, 41(2): 385-401. https://doi.org/10.1590/0101-31572021-3060

Boito Jr., A. and Berringer, T. (2013). Brasil: Classes Sociais, Neodesenvolvimentismo e Política Externa nos Governos Lula e Dilma. *Revista de Sociologia Política*, 47(21) 31–38. https://doi.org/10.1590/S0104-44782013000300004

Brandão, R. V. da. (2013). Ajuste Neoliberal no Brasil: Desnacionalização e Privatização do Sistema Bancário no Governo Fernando Henrique Cardoso (1995/2002). PhD dissertation, Universidade Federal Fluminense, Niterói.

Bresser-Pereira, L. C. (2017). Reforma Gerencial e Legitimação do Estado Social. *Revista de Administração Pública*, 51(1): 147-156. http://dx.doi.org/10.1590/0034-7612166376

Calva, J. L. (2019). La Economía Mexicana en su Labirinto Neoliberal. *El Trimestre Económico*, 86(343): 579-622. https://doi.org/10.20430/ete.v86i343.921

Calva, J. L. (2020). Retos Nodales del Desarrollo Económico en México Durante el Quinquenio 2020-2024. *Problemas del Desarrollo*, 51(202): 25-44. https://doi.org/10.22201/iiec.20078951e.2020.202.69638

Cristaldo, R. C. (2018). Desenvolvimento e Integração Internacional: os Casos de Brasil e México. PhD dissertation, Universidade Federal da Bahia, Salvador.

Cristaldo, R. C. (2021). Gestão do Desenvolvimento e Administração Política. *Revista Internacional de Investigación en Ciencias Sociales*, 17(1), 143-157. https://doi.org/10.18004/riics.2021.junio.143

Dardot, P. and Laval, C. (2016). *A Nova Razão do Mundo: Ensaio Sobre a Sociedade Neoliberal*. São Paulo: Boitempo.

Dumenil, G. and Levy, D. (2004). *Capital Resurgent: Roots of the Neoliberal Revolution*. Cambridge, Mass.: Harvard University Press.

Furtado, C. (2009). *Desenvolvimento e Subdesenvolvimento*. Rio de Janeiro: Contraponto; Centro Internacional Celso Furtado.

García, V. C., González, T. S. L. and Herrera, F. L. (2020). Crecimiento Económico e Inflación en México, 1993-2018: una Relación Lineal o no Lineal? *Investigación Económica*, 79(311): 83-109. http://dx.doi.org/10.22201/fe.01851667p.2020.311.72437

Gonçalves, R. (2014). Balanço Crítico da Economia Brasileira nos Governos do Partido dos Trabalhadores. *Revista da Sociedade Brasileira de Economia Política*, 17(67): 7-40. http://www.revistasep.org.br/index.php/SEP/article/view/44

Harvey, D. (2005). *O Neoliberalismo: História e Implicações*. Edições Loyola.

Harvey, D. (2011). *O Enigma do Capital e as Crises do Capitalismo*. Boitempo.

Harvey, D. (2013). *Os Limites do Capital*. Boitempo.

Harvey, D. (2017). *17 Contradições e o Fim do Capitalismo*. Boitempo.

Horner, R. and Hulme, D. (2019). From International to Global Development: New Geographies of 21st Century Development. *Development and Change*, 52(2): 347-378. https://doi.org/10.1111/dech.12379

Ibarra, D. (2011). O neoliberalismo na américa latina. *Revista de Economia Política*, 31(2): 238-248. https://doi.org/10.1590/S0101-31572011000200004

Mahbubani, K. (2013). *The Great Convergence: Asia, the West, and the Logic of the World*. Public Affairs.

Marglin, S. (2001). Origem e funções do parcelamento das tarefas. In: Gorz, A. (Coord.). *Crítica da divisão do trabalho*. Martins Fontes. pp. 37-77.

Martuscelli, D. E. (2015). *Crises Políticas e Capitalismo Neoliberal no Brasil*. PR, CRV.

Marx, K. & Engels, F. (2007). *A Ideologia Alemã*. Boitempo.

Marx, K. (1983). *O Capital: Crítica da Economia Política*. Abril Cultural.

Montiel, H. C. (2015). Reflexiones sobre las Crisis en los 90: México y el Sudeste Asiático. *Revista de El Colegio de San Luis*, 5(9): 32-63. http://www.scielo.org.mx/pdf/rcsl/v5n9/1665-899X-rcsl-5-09-00032.pdf

Ocampo, J. A. et al (2014). *La Crisis Latinoamericana de la Deuda desde la Perspectiva Histórica*. CEPAL.

Pineda, O. L. (2021). Desarrollo Balanceado versus Desequilibrado en la Globalización: Europa, Escandinavia versus Latinoamérica. *Análisis Económico*, 36(91): 211-236. https://doi.org/10.24275/uam/azc/dcsh/ae/2021v36n91/Pineda

Revueltas, A. (1996). *Las Transformaciones del Estado en México*: un Neoliberalismo "a la Mexicana". UAM-X.

Russell, P. (2010). *The History of Mexico: from Pre-Conquest to Present*. Routledge.

Saad-Filho, A. & Morais, L. (2018). *Brazil, Neoliberalismo Versus Democracy*. Pluto Press.

Sader, E. (2013). A Construção da Hegemonia Pós-Neoliberal. In *10 anos de Governos Pós-Neoliberais no Brasil: Lula e Dilma*. In: Sader, E. (Coord.). Boitempo. Flacso Brasil. pp. 135-144.

Salazar, C. A. (2020). Gasto Público y Crecimiento Económico: Controversias Teóricas y Evidencia para México. *Economía UNAM*, 17(50), 53-71. https://doi.org/10.22201/fe.24488143e.2020.50.519

Santos Filho, O. (2005). O fogo de Prometeu nas Mãos de Midas: Desenvolvimento e Mudança Social. In: Campos, T. las C. (Coord.). *Desenvolvimento, desigualdades e relações internacionais*. Ed. PUC Minas. pp. 13-75.

Santos, T. dos. (1976). A Crise da Teoria do Desenvolvimento e as Relações de Dependência da América Latina. In: Jaguaribe, H. (Coord.). *A Dependência Político-Econômica da América Latina*. Loyola. pp. 120-158.

Silva, R. O. da Peterle Neto, W. & Teixeira, E. C. (2021). Sistema de Inovação e Crescimento Econômico: uma Análise de Painel Dinâmico para o Período 2006-2016. *Economía, Sociedad y Territorio*, 21(65), 239-273. https://doi.org/10.22136/est20211620

Souza, N. A. de. (2005). *A Longa Agonia da Dependência: Economia Brasileira Contemporânea*. São Paulo: Ed. Alfa-ômega.

Stallings, B. (2014). La Economía Política de las Negociaciones de la Deuda: América Latina en la Década de los Ochenta. In: Ocampo, J. A. (Coord.). *La crisis latinoamericana de la deuda desde la Perspectiva Histórica*. CEPAL. pp. 53-82.

Vázquez, B. H. M. et al. (2017). "El impacto del TLCAN en las finanzas y la economía de México: una mirada desde las MIPYMES." *Revista Iberoamericana de Contaduría, Economía y Administracíon*, 6(12) 110-133. http://dx.doi.org/10.23913/ricea.v6i12.99

Ciencias Sociales
Universidad de la República
URUGUAY

Trabajo Social

FRONTERAS

DEPARTAMENTO DE TRABAJO SOCIAL
FACULTAD DE CIENCIAS SOCIALES
UNIVERSIDAD DE LA REPÚBLICA

Nº 17 (2)
SEGUNDA ÉPOCA

Diciembre 2021

FRONTERAS

Revista FRONTERAS

Segunda época N° 17 (2).

Diciembre, 2021.

Departamento de Trabajo Social

Facultad de Ciencias Sociales

Universidad de la República

Constituyente 1502, piso 4. Montevideo, Uruguay

Dirección electrónica: http://revistafronteras.cienciassociales.edu.uy/

ISSN: 2393-7688

Diseño de tapa de Sofía Morán González en base a la pintura de Jackson Pollock, Moby Dick, 1943.

Sumario